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Heuristics in financial decision-making: the selection of SME financing by advisers in an increasingly diverse market

Heuristics in
financial
decision-
making

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Abstract

Purpose – In order to better understand how heuristics are used in practice, the authors explore what type of heuristics is used in the managerial domain of financial advisors to small and medium-sized enterprises (SMEs) and what influences the shaping of these heuristics. In doing so, the authors detect possible fast-and-frugal heuristics in day-to-day decision-making of independent financial advisers who help owners of SMEs to acquire capital (e.g. loans, factoring, leasing and equity).

Design/methodology/approach – The authors inductively assessed the work of financial advisers of SMEs. Based on group discussions, the authors drew up a semi-structured interview-protocol with descriptive questions about how financial advisers come to a deal for their clients. The interviews of 19 professionals were analysed by relating them to the theory of fast-and-frugal heuristics.

Findings – Within their decision-making, advisers estimate the likelihood of acceptance by a few financial providers they know well in their personal network with a strong bias towards traditional banking products, although there are a large number of alternatives on the Dutch market. “Less is more” seems to be a relevant principle when defined as satisficing. Heuristics help advisers to deal with behavioural and economic limitations. Also, the authors have found that client interaction, previous working experience and the company the adviser is working for influences the shaping of the simple rules the adviser is using.

Research limitations/implications – The study shows how difficult it is to understand the ecological rationality of a certain group of professionals and to understand the “less is more” principle. Financial advisers to SMEs use cognitive shortcuts and simple rules to advise SME-owners, based on previous experiences, but it is difficult to determine whether that leads to the same or even better solutions for them and their clients than using probability theory and financial optimisation models. Within heuristics, satisficing seems to be a dominant mechanism. Here, heuristics help advisers in recognising possibilities by searching for similarities between a current financing case and previous experiences. The data suggests that if “less is more” is defined as satisficing for one or more stakeholders involved, the principle dominates the decision making of financial advisers of SME’s.

Practical implications – The authors suggest the relevance of a behavioural approach to finance by assessing the day-to-day decisions of financial advisers of SMEs. Also, the authors suggest that financial advisers are guided by previous experiences, and they do not fully assess a wide range of options in their work but need shortcuts to fulfil the needs of their clients.

Originality/value – The study comes close to day-to-day decision-making in finance by assessing how professionals make decisions. The authors try to understand types of heuristics in relation with “ecological rationality” and the less is more principle. The authors assess financial advisers of SME-companies, a group

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that has gotten little research attention until now. The influence of client interaction and of the company the adviser is working for is remarkable in the shaping of the advisers' simple rules.

Keywords Decision-making, Heuristics, Satisficing, SME-finance

Paper type Case study

Introduction

In the last 2 decades, behavioural determinants in financial decision-making have received more attention (e.g. [Evensky, 2018](#); [Barberis, 2018](#)). In management and organisation, behavioural determinants have been studied since the 1950s (e.g. [March and Simon, 1958](#)). In this article we explore what type of heuristics is used in the managerial domain of financial advisors to small and medium-sized enterprises (SMEs) and what influences the shaping of these heuristics. Hereby, we further develop insights on the characteristics of managerial heuristics (see [Artinger et al., 2015](#)).

We do this by relating heuristics as simple decision-making rules in strategy ([Bingham and Eisenhardt, 2011](#)) to fast-and-frugal heuristics ([Guercini et al., 2015](#); [Luan et al., 2019](#)), a developing research area. Fast-and-frugal heuristics are rules of thumb that assume that people are rational to a limited extent; Simon used the concept of bounded rationality here. Bounded rationality is the idea that rationality is limited, when people make decisions, by the tractability of the decision problem, the cognitive limitations of the mind and the time available to make the decision ([Simon, 1956](#)). Decision-makers, in this view, act as "satisficers", seeking a satisfactory solution rather than an optimal one, simply because they cannot be aware of all the possibilities ([Simon, 1965](#)). Within heuristics as simple decision-making rules, people only use part of the available information which allows adaptive responses under uncertainty ([Bingham and Eisenhardt, 2011](#); [Artinger et al., 2015](#)).

Managers and professionals such as financial advisors often have to make advisory decisions in an uncertain environment with limited information and with time and costs constraints. Using heuristics as simple decision-making rules means that people use part of the available information, which allows adaptive responses under uncertainty ([Bingham and Eisenhardt, 2011](#); [Artinger et al., 2015](#)). Decision strategies in the managerial domain therefore often rely on basic heuristics as satisficing, recognition and similarity. In an uncertain world, simple heuristics can lead to better and faster decisions ([Artinger et al., 2015](#)). [Gigerenzer and Todd \(1999, p. 117\)](#) showed that across 20 real-world environments "*the fast and frugal take the best*" was as accurate and sometimes even more accurate, than multiple linear regressions.

Our goal in this article is to understand better why these heuristics are used by advisors and what is the role of earlier experiences in the shaping of these heuristics. Hereby, we further develop the management research field by addressing which set of heuristic principles are relevant for professionals in a specific environment. Heuristics are not tools that always work, but are strategies that can be more successful in some uncertain environments in which logic and probability theory cannot be used ([Artinger et al., 2015](#), referring to [Groner et al., 1983](#)). [Artinger et al. \(2015\)](#) identify in the literature managerial applications of heuristics which can be traced back to five basic classes of heuristics: satisficing, tallying, lexicographic strategies, recognition and similarity. We recognise three of these heuristics' classes in our research project: satisficing, recognition and similarity. The principle of satisficing can be leading when an actor has to select information and solutions to make the most appropriate decision faced with uncertainty and tries to find a realistic and good enough solution. Within processes of recognition on the other hand, an actor is looking for characteristics he or she sees as important signals and which enable to find the best possible evidence to make a specific decision. These characteristics of decision-making rules help in complex situations or complex processes. In heuristics in which decision-makers are looking for similarities, a comparable process is executed, but then the whole case, the whole

situation, is subject within the heuristic. Own, previous experiences play a large role in similarity heuristics. We experienced in our research project that especially the banking background of many financial advisers for SMEs are important in this respect.

There seems to be an ecological rationality that determines the development of simple rules. Ecological rationality can be defined as the fit between a specific environment and a heuristic, a simple rule (e.g. [Artinger et al., 2015](#)). In other words, decision-makers must become aware that some simple rules are working within a specific context. Heuristics within these processes focus on – for example – processes of satisficing, similarity or do help to recognise certain critical characteristics within a complex decision-making process.

We also contribute to ethnographical studies of fast-and-frugal heuristics (e.g. [Guercini, 2019](#)) by assessing the individual decisions of a group of professionals in finance. Up to now heuristics have been mainly studied theoretically and within experiments (e.g. [Mousavi and Gigerenzer, 2014](#)). In understanding simple rules, their ecological rationality is a critical issue. The fit to their environment can decide if behaviour can follow strict guidelines, as suggested within the research programme of fast-and frugal heuristics (e.g. [Mousavi and Gigerenzer, 2014](#); [Artinger et al., 2015](#)), or if they are – more loosely phrased – simple rules, as [Bingham and Eisenhardt \(2011, 2014\)](#), suggest (see also [Look and Hinnen, 2015](#)). The last-mentioned authors use synonyms such as simple rules, rules of thumb or heuristic rules too. We follow Bingham and Eisenhardt in loosely using heuristics and simple rules as (more or less) the same, without suggesting that their approach is better.

To understand better what type of heuristics is used in the managerial domain of financial advisers to SME's and what influences the shaping of these heuristics, we have assessed the day-to-day decision-making of independent financial advisers who help owners of SMEs to acquire capital. We were interested in how simple rules or heuristics look in this specific environment; for example, whether these are financial or price-driven or related to available knowledge or experience. In doing this, we shed some light on the question how these financial advisers to SMEs work. We developed an inductive approach (see [Langley, 1999](#)) in which we analysed the descriptive information out of interviews using theoretical insights on heuristics.

In our research design, it was an important choice to work with independent financial advisers. These advisers work independently of suppliers of capital such as banks, lease companies or crowdfunding platforms and help SME-owners to acquire capital (e.g. loans or equity). Within the last decade, a significant number of new suppliers of capital entered the Dutch market, in which three banks dominate ([Treur, 2018](#)). We assume that this should have implications for the work of these advisers. We selected the advisers in such a way that they well represented the financial adviser community. We selected advisers we know of our research consortium and outside our consortium, we selected advisers who are self-employed and advisers who were from smaller or larger companies or organisations, and we selected advisers in all four of the geographical parts of the Netherlands (east, west, north and south).

The paper is structured as follows. In the second section, we briefly discuss the dominant theory on heuristics and decision-making. This gives more understanding of the research issue and the relevance of this study. In the third section we set out our methodology and our approach to data collection. In the fourth section we present our findings. Finally, we discuss the theoretical and practical implications of our research.

SME finance, decision-making and heuristics

This section describes the current state of knowledge on SME financing and on heuristics in decision-making within a certain context. First, we touch upon behavioural finance and decisions on the financial structure of SMEs. We relate these theoretical insights to the role of heuristics within decision-making processes at the end of this section.

Behavioural finance and SME's

In traditional economic theory, a dominant assumption is that individuals are price driven when everything else is equal (*ceteris paribus*). In finance research and decision-making this has resulted in the dominance of cost of capital theories (e.g. [Modigliani and Miller, 1958](#)). The price is set on markets by rational expectation in relation to all publicly available information. This implies that information determines the market prices. These theoretical assumptions seem to be visible in the financial structure of small and medium-sized companies ([Martinez et al., 2019](#)).

Financing theory offers some general insights for financial decisions of SMEs, but the financing theory is tested for the most part in large companies and barely in SMEs ([Berger and Udell, 1998, 2006; Fraser et al., 2015](#)). The most important theory that seems relevant to SME financing is the pecking-order theory ([Myers, 1984](#)). It assumes that borrowers have an order of preference when it comes to choosing sources of financing. First of all, preference is given to the use of internally available resources (retained earnings), followed by short-term debts and long-term debts (most often provided by banks) and lastly equity capital. One refinement that has emerged from pecking-order theory involves the use of friends, family and fools (FFF) as first providers of venture capital by start-ups ([Kumar and Rao, 2015](#)).

The empirical literature tests pecking-order theory by means of databases with information from annual reports of corporations or medium-sized enterprises, in which public company data is available ([Chittenden et al., 1996; Frank and Goyal, 2003; Beck and Demirguc-Kunt, 2006; Mina et al., 2013](#)). Results based on analysis of this data support the pecking-order theory. This theory is quite general and can be applied to small enterprises only to a limited extent. For example, pecking-order theory focuses on three main categories – one's own money, loans and equity capital – while around 40 different secondary forms of SME financing can now be distinguished ([Rauwerda et al., 2016](#)).

Slowly the assumption of rationality within economic decision-making seems to be (partly) broadened by behavioural insights, leading to complementary research of the pertinence of decision-making rules, heuristics and potential biases associated with the use of the latter (e.g. [Lee and Marlowe, 2003; Kang and Park, 2019](#)).

Heuristics

Next to finance theories there are behavioural theories on how people come to decisions (e.g. [Simon, 1956, 1965](#)). These theories focus on the limitations of “rationality” and on unconscious bias in decision-making. In this view, individuals use “rules of thumb” based on their knowledge and experience, and behaviour is determined by previous experiences of which people are often not even aware. Also, within finance the behavioural conditions of financial decisions are assessed (e.g. [Akerlof and Shiller, 2010](#), specifically on decision-making and heuristics see [Lee and Marlowe, 2003; Kang and Park, 2019](#)). According to [Gigerenzer and Gaissmaier \(2011\)](#) a heuristic is a strategy that ignores part of the information, with the goal of making decisions more quickly, frugally and/or accurately than more complex methods. Heuristics can be more accurate than more complex strategies even though they process less information (less-is-more effects). As Simon mentioned in 1979, classic rationality requires knowledge of all the relevant alternatives, their consequences and probabilities and a predictable environment without uncertainties. These conditions, however, are rarely met in the real world when people and enterprises have to make decisions. A heuristic is therefore not good or bad, rational or irrational; its accuracy depends on the structure of the environment (ecological rationality) ([Gigerenzer and Gaissmaier, 2011](#)). People can be effective decision makers by using simple heuristics that fit well into the structure of the environment ([Todd and Gigerenzer, 2012](#)).

There are three schools of thought concerning heuristics ([Bingham and Eisenhardt, 2014](#)). The most well-known is the approach by the social psychologists Amos [Tversky and Daniel Kahneman \(1974\)](#). By means of experiments they try to detect biases – systemic errors – and

heuristics – cognitive shortcuts (for an overview, see [Kahneman, 2002](#)). They stress the unconscious character of heuristics.

The second approach has been labelled as “fast and frugal heuristics”. Fast and frugal heuristics refer to simple, task-specific decision strategies that are part of a decision maker’s repertoire of cognitive strategies for solving judgement and decision tasks ([Gigerenzer and Todd, 1999](#)). In this tradition, researchers work on behavioural science within organisations. They try to model decision-making processes within particular situations by assuming certain underlying rules (e.g. [Gigerenzer and Marewski, 2015](#); [Artinger et al., 2015](#); [Luan et al., 2019](#)).

This approach is distinct from Tversky and Kahneman. It also assumes that heuristics can help decision-makers. They do not only limit the quality of a decision, as [Tversky and Kahneman \(1974\)](#) suggest. A heuristic is a strategy for making decisions, (most often) consciously or unconsciously ([Mousavi and Gigerenzer, 2014](#), p. 1673). [Artinger et al. \(2015\)](#) points out three characteristics. First, it is assumed that researchers can make precise predictions about decision-making strategies people use decisions can be modelled, are computable. Second, a great deal of attention is given to ecological rationality, which can be defined as the fit between a specific environment and a heuristic. A heuristic is ecological rational when its function matches the cognitive abilities and especially the environment in which it is used ([Mousavi and Gigerenzer, 2014](#)). In the context of the cognitive abilities [Simon \(1965\)](#) speaks of “satisficing”. Economic actors do not seek the best rational solution but look for a solution that satisfies them in an event, simply because they cannot be aware of all the possibilities. In the context of environment [Gigerenzer and Todd \(1999\)](#) argues that a heuristic is ecologically rational to the degree that it is adapted to the structure of the environment. Or in other words people can be effective decision makers by using simple heuristics that fit well into the structure of the environment.

This leads to the third characteristic of research on fast and frugal heuristics, the important principle of “less can be more”; suggesting that in an uncertain world, simple rules can be more effective than decisions based on full information. Less-is-more effects thus explain why people rely on heuristics. The study of the ecological rationality of heuristics, or strategies in general, is such an explanatory framework ([Gigerenzer and Gaissmaier, 2011](#)). Heuristics are in this view superior to other decision strategies when actors have to make decisions in an environment of uncertainty.

The third school on heuristic decision-making has been developed in the field of organisational strategy and management (e.g. [Eisenhardt and Sull, 2001](#); [Davis et al., 2009](#); [Bingham and Eisenhardt, 2011](#)) and focuses on simple rules for complex decisions that have to be made in a complex environment. Bingham and Eisenhardt suggest that heuristics produce rational results. Company representatives are more or less guided by shared rules of thumb which guide their strategic decisions. These heuristics are not automated but tend to be more culturally embedded and implicit, focused on the long-term development of a company. As such they constitute strategy in high-velocity environments. [Bingham and Eisenhardt \(2011\)](#) suggest various sorts of heuristics. Some help in selection, others have a procedural nature.

Our research relates the second and third approach to heuristics. We contribute mainly to the fast and frugal approach by trying to understand better what type of heuristics is used in the managerial domain of financial advisors to SME’s and what influences the shaping of these heuristics. We try to detect an ecological rationality with related “less is more” rules. Hereby we follow an approach that is more closely comparable with the third school, the rules of thumb – suggested by Eisenhardt and her colleagues – which practitioners use when they have to decide about an uncertain future under pressure (e.g. [Eisenhardt and Sull, 2001](#); [Davis et al., 2009](#); [Bingham and Eisenhardt, 2011](#)). We assess if advisers in finance develop certain heuristics that are related to specific challenges in their complex context.

Based on a behavioural approach to finance and theory on heuristics we assume that at a certain moment, previous experiences are used in a new context. These previous experiences

lead to simple rules that help them in their work. To gain insights in these processes, we determine what their opinions are on financial products, related to a certain type of SME company. In our assessment we attempt to relate considerations in their decision-making process to the dominant rationality in economics and finance.

Within heuristics as simple decision-making rules, people only use part of the available information which allows adaptive responses under uncertainty (Bingham and Eisenhardt, 2011; Artinger *et al.*, 2015). Decision strategies in the managerial domain therefore often rely on basic heuristics as satisficing, recognition and similarity. In an uncertain world, simple heuristics can lead to better and faster decisions (Artinger *et al.*, 2015). Gigerenzer and Todd (1999, p. 117) showed that across 20 real-world environments *the fast and frugal Take the Best* was as accurate and sometimes even more accurate, than multiple linear regressions (1999).

As has been describes above, we assess what type of heuristics is used in the managerial domain of financial advisors to SME's and what influences the shaping of these heuristics. Heuristics are not tools that always work, but are strategies that can be more successful in some uncertain environments in which logic and probability theory cannot be used (Artinger *et al.*, 2015). Artinger *et al.* (2015) identify in the literature managerial applications of heuristics which can be traced back to five basic classes of heuristics: satisficing, tallying, lexicographic strategies, recognition and similarity. We recognise three of these heuristics' classes in our research project: satisficing, recognition and similarity. The principle of satisficing can be leading when an actor has to select information and solutions to make the most appropriate decision under uncertainty and tries to find a realistic and good enough solution. Within processes of recognition on the other hand, an actor is looking for critical characteristics he or she sees as important signals and which enable to find the best possible evidence to make a particular decision. In heuristics in which decision-makers are looking for similarities, a comparable process is executed, but then the whole case, the whole situation, is subject within a heuristic. These characteristics of decision-making rules help in complex situations or complex processes. The building blocks of a heuristic focussing on satisficing, for example, are different than a heuristic in which recognition or similarity is the key principle. The basic principles of the building blocks are the same though: search, stopping and decision rules. Search rules state where to search for information, stopping rules state when to stop searching and decision rules state how to decide given the gathered information. (Gigerenzer and Gaissmaier, 2011).

Methodology

This is a theory developing case-study (Eisenhardt and Graebner, 2007) analysing narratives, partly by a quantification strategy (Langley, 1999). Below we will further describe our approach and the choices we made.

First, it is important to stress that the group financial advisers we interviewed, is not driven by financial incentives that should force them to sell one specific product (as an adviser working for a bank has). The advisers in this study work independently of suppliers of capital such as banks and help SME-owners to acquire (new) capital (e.g. loans or equity). Sometimes they are self-employed and sometimes they are advisers who had joined both small and large consultancies or are part of a franchise organisation that helps them in their marketing and operations. All of these advisers are not tied to specific financial products or financial companies but should be able to make the best possible financial decision for their client only. In the Netherlands, almost two-thirds of SME companies use a financial adviser – usually an external certified accountant or auditor (Van der Veen *et al.*, 2015). Here, it is important that all the interviewed advisers stated that they do not receive any financial benefits from companies which financial products they suggest.

The focus on this group is important in our research design. They should be independent to prepare the best possible advice about financial products and are not driven by objectives of the

suppliers of these products. It is also important to note that there are no legal or other formal requirements – including education – for financial advisers to SMEs in the Netherlands. Advisers cannot be influenced beforehand, directly by a certain rule or trained in a certain way.

In order to grasp decision-making processes, we use an inductive methodology. First, we started three rounds of expert panels to understand how financial advisers for SMEs work. This led to a semi-structured interview protocol ([Appendix](#)) by which researchers asked the advisers to describe their decision-making process, without trying to suggest certain options beforehand. The results were analysed in Atlas.ti, a software program in which parts of interview transcripts can be labelled with codes and analysed. What were the words and word-combinations used most often, and in which relationship were they used? Our counting and pattern analyses were related to quotes by individual advisers. These results were grouped and related to critical components of heuristics, the less is more principle and ecological rationality. The whole process of our research has been described in more detail in [Appendix](#).

Out of our group discussions with financial advisers, we found that four areas are common in decision-making processes of advisers. In their (1) daily activities they use (2) certain instruments, whereby, as people, they have (3) particular knowledge and skills and (4) a certain attitude. The semi-structured interview protocol that emerged should systematically address all these themes and then for them to be analysed systematically (see [Appendix](#)).

With 19 interviews, we think we reached a level of saturation. In analysing the interviews at a certain moment few really different answers were given. The descriptions of the processes started to look similar. Even when we compared interviews that were executed by different researchers, similarities became dominant. Given important similarities in the answers given by advisers we interviewed, replication logic can be developed ([Yin, 1994](#)).

In order to trace the considerations of financial advisers to SMEs, a semi-structured interview protocol has been drawn up with open and neutral questions that would not favour a certain approach or certain financial instrument. The researchers used this protocol to conduct the face-to-face interviews and also followed the sequence of topics and questions. In order to get insights into the knowledge and skills of financial advisers to SMEs, we followed a number of steps that are common in qualitative analysis ([Patton, 2002](#); [Cassel et al., 2006](#)). In the construction and codification that we used we followed a number of phases. In five iterations, codes have been designed. They have then been converted into concepts. There had to be agreement at all times between all the researchers involved, (see [Appendix](#)).

In doing so, we have developed a quantification strategy towards process data, combined with narratives – represented by the quotes, as suggested by [Langley \(1999\)](#). We have assessed the interview transcripts from three angles. We started by “counting” the key words (e.g. banks, crowd-funding, costs) or word-combinations with a similar meaning, then we related these words to each other (co-occurrence analysis), and we related these to quotes made by individual interviewees.

By embedding the studied issues (1. daily activities 2. instruments, 3. knowledge and skills and 4. attitude) as well as possible in two important streams of research and by explaining the path we followed in our research (methodology), we have tried to build reliable and valid analyses of a process. By explicitly describing our change from deduction to induction and assessing data about processes by a large group of advisers (for a case study) from three angles, we think we have met the standards of a theory developing case study ([Eisenhardt and Graebner, 2007](#)).

Results and analyses

Banks and their products dominate the ecological rationality of financial advisers of SMEs

In financial reasoning (pecking order theory), bank loans are only one opportunity of capital. Next to this theoretical argument, within the last decade many alternatives have been

developed for bank loans in the Netherlands. These two conditions could imply that advisers would take a lot of opportunities into account when they are in a process of advising for a specific financial product.

Still, we find that bank products are extremely dominant in the reasoning of financial advisers. At first, in interviews, advisers tend to give the impression that they are always carefully considering the dozens of existing forms of financing. From the analysis of the codified forms of financing, however, it appears that the advisers are talking primarily (286 out of 751 times, or 38%) about bank loans and overdraft facilities, and leasing (7%) and factoring (8%), whether from a bank or other institution, as the most frequently chosen forms. Other forms of financing are sometimes mentioned, but they come up much less frequently in advisers' repertoires. The dominance of banks in the total amount of capital provided to SMEs (Treur, 2018), is displayed in the reasoning of advisers in every respect, as is visible in our co-occurrence analyses also (see Table 1). The co-occurrence table displays how often various words and related constructs are used in relationship to other words and constructs.

In the interviews with financial advisers, bank loans and overdraft facilities were the form that was mentioned the most frequently (286 times/17 advisers) (see Figure 1). There is a strong preference for this method of financing as a starting option. It is seen as the easiest one to acquire. In addition to bank financing, factoring (63 [12 advisers]) and leasing (52 /12 advisers) are also frequently mentioned by financial advisers. Crowdfunding is also frequently mentioned as a form of financing (164 times/17 advisers), but often as a point of discussion and not as the most popular advised form of financing. During the interviews, a lot of opinions about crowdfunding came up. This is a point of difference from financing by banks, and from leasing and factoring, which are actually advised frequently by SME advisers. All other forms of financing, such as microcredits (17/6 advisers) and funding from family and friends (and Fools) (16/7 advisers), get hardly a mention.

Also, within the co-occurrence analysis, in which the relationship between various statements is made, everything more or less starts with a bank loan or overdraft facility. Other options are much less discussed, especially not at the start of a relationship. The adviser first assesses the opportunities of bank financing, if that leads to issues, other options are developed. The advisers are clear about that:

So, what are you going to do? Then you can go first to Rabobank and the ING bank, or the ABN bank. (Adviser 10, quote 44)

Well, it always starts at the regular bank funding, loan, credit. I think about leasing, I think about debtor financing, factoring ... (Adviser 7, quote 9)

Given the dominance of banks as a topic in the interviews, it is interesting to look at the topics during which banks are often mentioned, as displayed in the co-occurrence table. Bank financing is mentioned with particular frequency in combination with crowdfunding (56 times), with the information to be provided by the entrepreneur and his plans (40 times) and with costs (38 times).

Also, we assume that financial advisers see themselves as officials with a specific role and a particular code of conduct to follow. This means that there is a certain agreement about the instruments that the advisers put forward to the entrepreneur.

Thus, we assume that there is a kind of shared opinion, an agreement on what (1) knowledge and skills, (2) what attitude, (3) what activities and (4) what tooling are needed for the various financing instruments such as bank credit and crowdfunding.

As has been said before, some other options of finance are mentioned. From about ten years ago crowdfunding is an alternative financial product to banks. Private investors can offer loans (but also equity) via an IT-platform to companies, without interference of banks. Crowdfunding can be used as an alternative form of financing if banks are unwilling to offer

	Bank loans and overdraft facilities	Criteria	Crowdfunding	Information	Costs	Leasing	Life cycle stage	Entrepreneur	Time
Bank loans and overdraft facilities	0	22	56	40	38	29	21	20	14
Criteria	22	0	3	10	4	5	2	3	1
Crowdfunding	56	3	0	10	24	10	14	10	5
Information	40	10	10	0	10	3	4	52	9
Costs	38	4	24	10	0	10	4	18	37
Leasing	29	5	10	3	10	0	4	3	3
Life cycle stage	21	2	14	4	4	4	0	9	0
Entrepreneur	20	3	10	52	18	3	9	0	8
Time	14	1	5	9	37	3	0	8	0

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Table 1. The co-occurrence table displays how often various words or constructs are used in relationship to other words and constructs

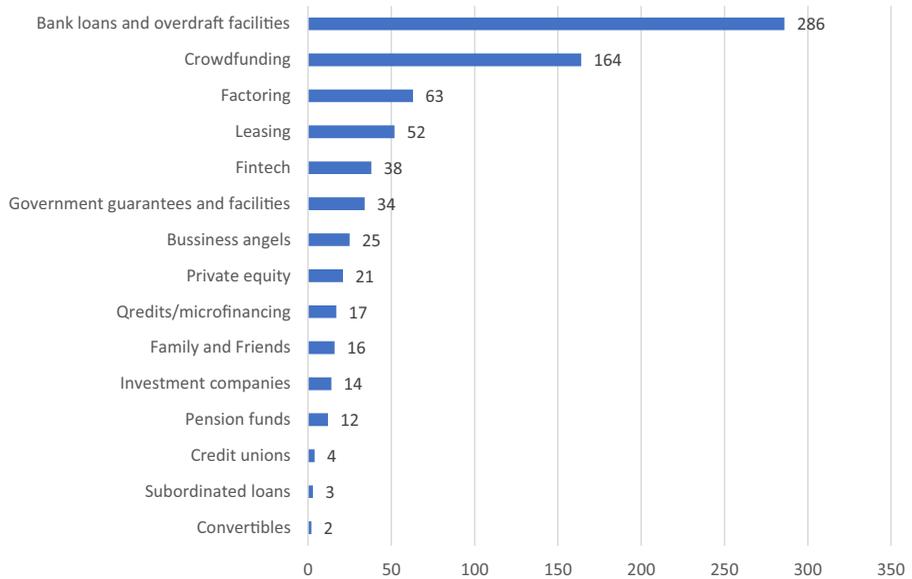


Figure 1.
The number of times that financiers/ financing opportunities were mentioned during interviews

financing, or extra financing, to a company. Crowdfunding is often seen as a working-capital loan and fits in well in a consumer market because of the marketing tool it also uses, in the form of a crowdfunding campaign. Banks nowadays usually find working-capital financing unattractive. According to some advisers, the current account with a permanent limit used to be the standard solution for working capital, but nowadays such accounts are provided very rarely, not at all, or under very strict conditions. Working capital can be financed by crowdfunding according to one-third of the advisers interviewed. Only one adviser believed that this is not possible, because crowdfunding is less flexible than bank financing.

Sometimes banks also want to join a campaign if they see that an entrepreneur is successful in obtaining working capital financing by means of crowdfunding. They see the success of a campaign as approval of the company's business plan. This gives the bank more security. Crowdfunding, together with bank financing, is not only often mentioned together, but in practice actually occurs in combination, according to the interviewees. Banks that are not interested at first, sometimes suggest crowdfunding for part of the financing requirement in order to determine how enthusiastic the market is. They then see this as confirmation of a low risk and will be prepared to meet part of the financing requirements. In fact, in this way banks are allowing the credit assessment to be carried out by the crowdfunding market. However, banks are strict with regard to the repayment obligations of entrepreneurs on crowdfunding loans and sometimes set certain requirements regarding the repayment obligations.

In addition, a number of banks are in the process of setting up partnerships with crowdfunding parties. Most of the interviewees are not enthusiastic about this. They have the impression that banks are doing this mainly for positive publicity, and that in reality not a whole lot is going on here. The difficulty existing parties have with an instrument like crowdfunding is illustrated by the following quotes:

What you see more and more nowadays, the bank that wants to remain involved, so the bank does a part. For example, with crowdfunding, you see more collaboration of banks with crowdfunding platforms, for example. (Adviser 4, quote 81)

Well, what you see more and more nowadays is the bank that wants to stay involved anyway, so that the bank does some part of it. For example, with crowdfunding, you see more collaboration between banks and crowdfunding platforms. So that in itself is a relatively obvious combination. On the one hand, I welcome this, but on the other, I do not always agree with the way this is done in terms of certainties and that sort of thing. (Adviser 4, quotes 81 and 82)

The quotes above suggest that banks try to stay involved when new financial products are taken on board by an SME, as if they are developing a defensive strategy to protect their market.

As has been said already, banks still dominate the market for SME-finance in the Netherlands, also because in many cases they offer the cheapest option. Nevertheless, it still happens that a bank charges relatively high rates for a bank loan (from 9 to 12%), and that means that other forms of financing, such as crowdfunding, are hardly possible, if at all. The costs a bank charges cannot be separated from a lack of flexibility on the bank's part, or from the speed with an entrepreneur wants their application to be processed.

To conclude, costs are a serious issue to consider, as is illustrated by the following quotes:

Factoring . . . That is expensive, that is an expensive form, but you do get cash immediately, you immediately get liquidity. (Adviser 15, quote 45)

If an adviser can finance everything through the bank, he still does. That is the way of least resistance and also with the lowest interest rate. (Adviser 21, quote 17)

Next to banks and crowdfunding, leasing gets some attention. This is an instrument that has existed for some time already, and banks often own leasing companies. Leasing is seen as interesting for capital goods such as machinery and cars. Leasing is reasonably straightforward and suitable for the co-financing of investments (a bank loan for a building, leasing for machinery). It is one of the first options advisers will mention (along with banking, crowdfunding and factoring) when it comes to the well-known financing products. Leasing is also offered by the banks themselves. An adviser spends relatively little time on a lease application.

To conclude, bank products dominate the behaviour of financial advisers. Other funding options get little attention. This raises some important questions about the work of the professionals within this study and about the nature of ecological rationality. For example, it suggests that these experiences are shared to a certain extent. In the discussion section these questions will get more attention. First, we display some results in relationship to another important characteristic of fast-and-frugal heuristics, the “less is more principle”.

Financial advisers, their heuristics and the “less is more principle”

Advisers seem to have developed certain simple rules in their work. “This is how I tend to do this”, or comparable statements, have been counted 27 times (10 advisers). Decisions are driven by previous experiences. For example, the intake is very important. Based on some basic information, the advisers try to assess if a funding option is possible or not. Costs of advice seem to be leading here. Finance advisers are faced with several uncertainties, for example because SMEs want to obtain money quickly without having time to plan. An adviser is aware that the client will not pay him for advice that does not lead to a result. Next to costs, these selection mechanisms are related to information and preferences of the adviser and his client. This will be further discussed in this section.

It seems that advisers use something like rules of thumb, although the data has certain limitations to understand heuristics. We only counted the number of times, number of advisers and the relationships between the various constructs. We cannot determine if they decide mechanically, or if the heuristics we suggest are related only to the words they use.

In general, there are five critical determinants in the decision for a certain funding, which can also be related to the co-occurrence analyses (Table 1). These five determinants show

how the uncertainty situation of financial advisers is characterised. First, some SME-owners need money quickly. In that stage, speed is everything and other reasons are less relevant. Second, especially for small loans, the transaction costs (in which costs for advice can be included) limit the opportunities for an adviser to come with the best possible financial product. Given the amount of money needed by the SME-owner, advisers can spend only a little time. Third, cost of capital is important. When there is time available, advisers can do their best to come with the cheapest option for a client. Originally this was an important business model of advisers also. Fourth, it can happen that advisers see certain funding options, but that clients have certain preferences which block the option. Most often this happens when clients do not want to leave their bank with which they can have a long-standing relationship. Fifth, advice should be dependent on the long-term strategy of the company. Is it wise to take a bank loan for which collateral is necessary, when later that collateral could be necessary for something else? As is mentioned earlier, in some of these cases leasing or a subordinated loan could be a better option, although a more expensive one. The collateral could be used at a later stage.

We do not want to suggest a similar reliability as in statistical reasoning. However, our accounting presented within the co-occurrence analyses (Table 1) gives some suggestion about the dominant reasoning of financial advisers, the five simple rules they use. If we take the financial products of banks as issue that is discussed by advisers, time issues are critical within certain situations. Within the co-occurrence analyses it is mentioned 14 times in relation to banks. This is also related to costs (37 times), which strengthens the argument that it is important. Second, the role of the SME-owner is important (20 times mentioned). What is his or her opinion about the bank, and vice versa, is it seen as trustworthy, information is often mentioned here too. The preferences of a client seem to be guiding the financial adviser in his decision making: related to that are the characteristics of the company. Information (mentioned 40 times) and life cycle (21 times) are critical and directly relate to the strategy of the firm. Information (40) together with costs (38) and time (14) are issues that are related to the costs of the transaction and the role the adviser has in this. This can be related to various quotes:

And basically, I always say, when you can acquire a large banking loan, you always have to apply for it. Nine out of ten times out it's just cheaper. (Adviser 4, quote 69)

Look, step one is almost always the bank, for reasons such as just neat pricing, good, et cetera. (Adviser 15, quote 15)

Banks and starters that is no longer the logical combination, so you should rather have produced at least two, and preferably three times, annual figures, that they see what the line is . . . (Adviser 15, quote 43)

The five simple rules we suggest will be assessed in more detail. First, a critical role of advisers is to help their clients to meet the information requirements of banks or other providers of capital. They are a sort of information broker. This is an element of the advisory process that takes a lot of time, which is equal to transaction costs in these cases. An SME often finds it difficult to provide all the necessary information and to substantiate all of its plans and forecasts. The financial adviser plays a major role in this part of the process. In general, banks and crowdfunding platforms request the same information from SMEs. Although in general terms requirements look similar, the devil is in the detail.

And you see that financiers, in general, love the way we present it, including the banks. They want the analysis that way. (Adviser 15, quote 27)

Within the first simple rule, when money is needed urgently, cost of capital and transaction costs are less important. The urgency for the client dominates the decision-making process.

Also, in this case the adviser, as an information broker, has the role of bringing the accurate information to the suppliers of capital, the financiers. Not only banks and information were mentioned frequently here, also information and entrepreneurs were used in combination (52 times). As information brokers, advisers have an important role in ensuring that their clients meet the criteria of the bank. Banks and the criteria they set for an SME client were mentioned 22 times by the advisers to SMEs who were interviewed.

What is striking is that most people say that the criteria that an SME has to meet in order to obtain bank financing are constantly changing. A critical role for the adviser is to be an intermediary between the SME and banks, as is demonstrated by the following quotes also.

We help SME entrepreneurs with financing, if I sum it up very briefly. So, in general, that is bank financing, in most of the cases, because it's (1) still the cheapest, (2) usually the most flexible, and if you know the right people, there's still a lot possible. The story was, the banks are locked, and yes, we have worked hard to undo that for the SME entrepreneur. (Adviser 14, quote 1)

Refinancing is often difficult. . . And the big banks have agreed with each other, we do not solve each other's problems. So, if you have a problem with one bank you will not get a foot in the door at another bank. (Adviser 18, quote 17)

The costs of advice (mentioned 211 times/14 advisers) and time (mentioned 97 times/15 advisers) are dominant aspects in the financing process. Only the information requested of the entrepreneur was mentioned more frequently (218 times/17 advisers). See [Figure 2](#).

The second simple rule, the cost of advice, is dominant especially when the funding is low. Time and costs are mentioned by the interviewees 37 times in combination. These are important considerations for the process, because the more hours an adviser must charge, the higher the costs of the advice will be. It is clear from the interviews that financial advice from an adviser to an SME is usually too expensive, especially for start-ups and sole proprietors who want to expand or need some extra financial latitude. In that case, the amount of financing needed cannot justify the costs of the advice. In addition, there is a group of SMEs that can pay a little for financial advice.

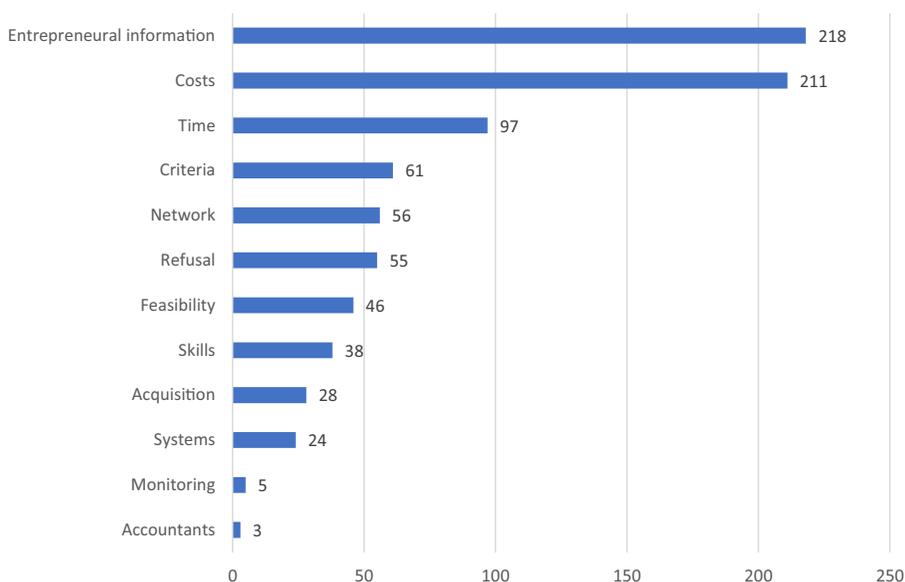


Figure 2.
The number of times
the elements of the
advice process were
mentioned during
interviews

There is a group of financial advisers who can provide this in a short time with a kind of hit-and-run approach: The adviser helps the entrepreneur just once with the financing requirement, and the adviser and the entrepreneur then part ways. SMEs with a little more room for manoeuvre can afford more extensive financial advice. There is also a group of advisers who focus on these. These advisers also take the financial structure of the company into account in their analysis and look towards the future financial picture too: forms of financing that are opted for now will also have an impact on flexibility and the range of options in the future.

Ultimately there is only one interest and that is the interest of the customer; the customer has to be serviced the best, and it is often the case that the customer considers the price to be a very important factor. So, at the moment bank financing, despite all the negative things that might sometimes be attached to it, is priced much lower than the rest. Then we try, at the request of the customer, to put that in as much as possible. (Adviser 18, quote 21)

The preferences of the client are a third dominant rule in decision-making. Here there seems to be a kind of dichotomy in the market for financial advice. On the one hand, there is a group of advisers who focus on smaller SMEs and who use a hit-and-run approach to keep the hours they put in and the costs they incur to a minimum. On the other hand, there is a group of advisers who have a longer-term relationship with SMEs and who can assist them more extensively with advice, not only on their current financing needs, but also on the financial structure and the future of the company in question. The latter, of course, costs more of the adviser's time and results in a steeper bill.

For an adviser to SMEs, it is important to assess in an open discussion what an entrepreneur's expectations and objectives are, and what the company's situation is, what kind of product and market the entrepreneur is active in, and generally what is needed. It is not seen as crucial that the adviser has the *best* financing solution, measured in terms of cost of capital. It is *more important* that the entrepreneur be able to choose the financing solution that best suits them. The adviser can advise the client, but it is the client who ultimately decides what they want, as is illustrated by the following quotes.

... So, in the end the only preference we have is the entrepreneur: he ultimately determines. So, we give advice; we would combine it so and so, stack it. And if that entrepreneur says, no, I still want to go counterclockwise, or I want to go clockwise, or I want it this way or I want it that way: in the end, the entrepreneur is decisive. (Adviser 8, quote 22)

Well, it always starts with me; I want to know who I'm dealing with, regardless of numbers. . . (Adviser 7, quote 20)

For us it always starts with entrepreneur and company and profile; of why this is a good entrepreneur. (Adviser 14, quote 48)

Advisers to SMEs indicate that it is important that they know what type of entrepreneur they are dealing with, as well as what kind of motivation, vision and mission, but then also what their needs and preferences are. One entrepreneur cannot stand banks, while another's just the opposite. According to advisers to SMEs, there are some entrepreneurs, often the older ones, who find it difficult to publish their data and forecasts on crowdfunding platforms. They think this is sensitive information from the competition standpoint. In addition, a crowdfunding campaign often costs a lot of time, energy and money that an entrepreneur must be willing to spend. Advisers try to come close to the SME owner:

I usually want to know what the entrepreneur is doing; how old is it, yes, you usually see that, but how long does he want to continue? What is his drive, what is his vision, what is his mission? Does he want to stop within five years? Or does he want to double his turnover within five years? Does he

want . . . So, I want to know a bit more about where are you going with the company, and with yourself? (Adviser 10, quote 24)

For a financier, it is important to know an entrepreneur's age, education and experience, and whether they already have a strong track record or is just starting out. In addition to information about clients and competitors, lenders also want to know how an entrepreneur has built up their new or existing business, and what they have done to that end – or perhaps they have been a bit passive. Some advisers also take their clients to the financier so they themselves can tell them all about their company and show their enthusiasm. Advisers want to show that entrepreneurs with SMEs have a good understanding of how business works and that they know what they are talking about. These aspects of the entrepreneur are reflected in both a financier's attitude and how much the financial solution they offer costs, as is reflected in the quotes also:

It is always the entrepreneur himself: who is that? (Adviser 3, quote 72)

Yes, that's the personal story of what someone does. . . . The first thing I do is Google and what information do I get and there are there no crazy things that I do not want to be associated with. (Adviser 7, quote 21)

Well, before I have the first conversation, I have a look, who am I dealing with? Then I already look at the Chamber of Commerce, just look online what someone is doing, maybe I drive past the building when I am close, but then I already get a bit of an estimate of who I am dealing with. (Adviser 13, quote 59)

If you see the entrepreneur for the first time and you have a conversation with him, or him or her, yes, then of course you look at, what do I think of him or her, and do I think that he or she can bring that company to a higher level yes or no. (Adviser 16, quote 24)

What do we think of that entrepreneur, and then we also look at how he is doing privately. And what is his background? (Adviser 16, quote 48)

In all examples the other two simple rules come back; the strategic information of a company is a relevant, next to costs of capital, but as part of reasoning which consists out of various other simple rules. For all financiers, not only information about the company, but also about the entrepreneur themselves, is important to assess the risks and opportunities (see [Figure 3](#)). According to advisers, the level of knowledge that entrepreneurs in SMEs have about what kind of information is necessary for funding, varies considerably. Some do not have a clue – often the smaller entrepreneurs – while others can arrange everything themselves without the help of an adviser. There are also entrepreneurs who are curious and who get actively involved in new developments, while others do not understand them and do not really want to learn about them in any detail. In addition, some entrepreneurs are cautious and wonder whether parties they do not know are in fact reliable.

Summarising the results and analyses, we find that the interest rate – or a similar price mechanism- as a component of the cost of capital is not the most dominant issue in the discussions between advisers and their clients. It is one of the components. Critical is a smooth process with limited costs of advice. To achieve this, the advisers use some simple rules. The cost of advice should be in line with the size of the loan or other financial product. In some cases, money is needed as fast as possible – for example in times of a crisis or a unique business opportunity – and costs of advice are less related to size of the amount of money needed. Also, preferences of the SME-owners themselves are important. The business plan of the company gets attention. Interesting is that retained earnings – first and cheapest funding opportunity for companies – are not mentioned at all in the interviews.

After 2007 banks were more hesitant towards financing SMEs and many alternative finance suppliers entered the market. Based on these two reasons, a different mindset of

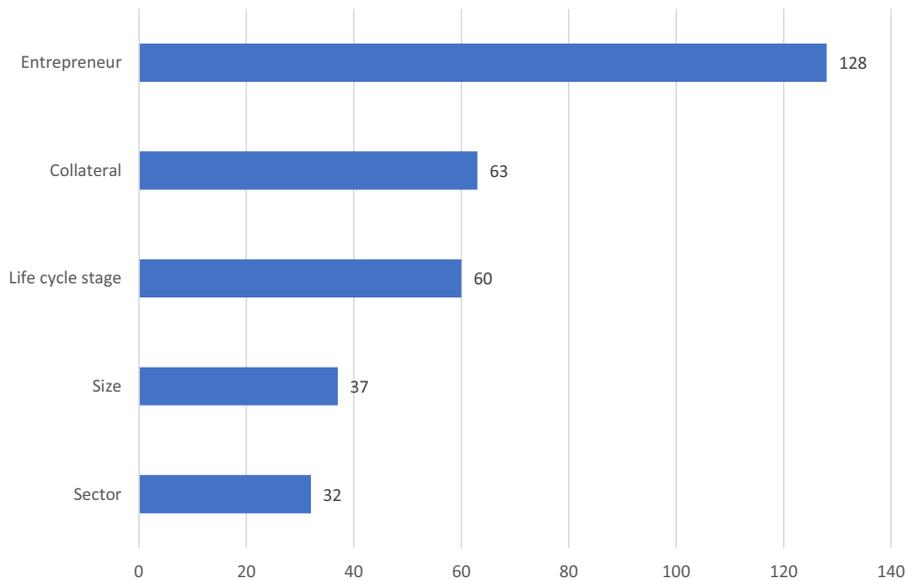


Figure 3.
The number of times the risks associated with financing are mentioned during interviews

advisers could have been expected, also because various organisations in the Netherlands suggested this (Rauwerda *et al.*, 2016). It seems that adviser's behaviour is fairly stable over the years. When they described the process they work by, advisers say that they most often know the best possible solution out of a great number of opportunities within the first serious interaction with the client, which suggests they use simple rules. When in interviews individual cases are discussed, previous working experiences dominate. A vast majority of the advisers has a banking background and so bank financing is by far the most important choice which they consider. Often, other options are assessed only when a bank loan is not possible. In assessing other options, time constraints are critical. Advisers need to come to rapid judgements based on previous experience. They have to assess within a short period of time if they can advise a client within certain financial constraints. That causes them to be driven by previous experiences which seem to become simple rules at a certain moment. A certain ecological rationality seems to develop. For example, banks dominate in their behaviour because they know them and their products best. Also, it is relevant that retained earnings were never mentioned as an option, where it is the most prominent option in the pecking order theory. Do advisers not see this as part of the work because they relate their pay to a successful financial deal?

Advisers seem to operate as a kind of information broker and have simple rules which help them – rules to decide if an SME will be able to get funding. Next to selection of financial products, they also have a role in meeting the requirements of the provider of capital. This seems to fit a pattern that is suggested by Bingham and Eisenhardt (2011). In an early stage of a particular case, selection and procedural heuristics are developed. Advisers have to decide quickly if a client would be able to get a certain financial solution. If the adviser finds it necessary, he checks his assessment with a supplier of capital. This last check is not only part of the selection process; it has a procedural character as well. The acceptance criteria of banks and other providers – related to procedural heuristics – now and then change. The advisers check if a client will be able to meet them.

The decision-making process itself does not seem very complicated. The adviser estimates at the first meeting with the client or directly afterwards if a business plan is

fundable. In this stage he uses some simple rules by which he decides if it is feasible to advise the client. Particularly satisficing, recognition and similarity heuristics seems to play a role in this phase of the process. The principle of satisficing is leading when the adviser has to select information and solutions to make the most appropriate decision under uncertainty in the specific client case and tries to find a realistic and good enough solution for the specific client. A satisfied customer is more important for the adviser than an exhaustive search of all financing possibilities. The adviser uses the recognition heuristic when he is looking for critical characteristics he sees as important signals and which enable him to find the best possible evidence to advise a specific financing instrument. The adviser applies the similarity heuristics when he is looking for similarities, or a comparable process or case he executed in his previous working experience. Most often, the adviser then already decides or has a fairly well-defined plan what would be the most appropriate solution. If the SME concern agrees, the adviser starts organising the deal. If his solution leads to problems, at a certain moment he tries to develop alternatives. As such, these simple rules demonstrate that the adviser is aware previous experiences are crucial within the current situation.

Discussion

In their decision-making, financial advisers of SME's estimate the likelihood of acceptance by a few financial providers they know well in their personal network with a strong bias towards traditional banking products, although there are a large number of alternatives on the Dutch market. "Less is more" seems to be a relevant principle when defined as satisficing. Heuristics help advisers to deal with behavioural and economic limitations. We have found that client interaction, previous working experience and the company for which the adviser is working, influences the shaping of the simple rules the adviser is using. Our data shows that advisers do not make an in-depth analysis of a large variety of financial products, a variety of loans, equity and financial products in between like leasing and factoring. Also, advisers do not follow the pecking-order theory. According to this theory, they should first assess if retained earnings are possible as financing solution, then they should check out bank loans and if that is not possible, they should advise an equity-based solution. Our results suggest that other forms of reasoning in decision-making are relevant.

There seems to be some order in the reasoning of advisers, some order in the simple rules or heuristics which advisers use. The most basic rule is that when a company needs money as fast as possible, that is paramount. Second, especially for small loans, an adviser has to spend an amount of time in relation to the size of the loan. Here transaction costs are decisive. Third, the adviser has to meet the wishes of the client and here the satisficing heuristic seems to play an important role in the decision-making process of the adviser. Some clients have a variety of opportunities for funding but are not interested in some of them due to personal preferences. For example, some older SME owners do not appreciate crowdfunding. Fourth, when there is time for research, cost of capital can be a dominant rule in decision-making. Fifth, a well-attuned analysis can be made of the long-term strategy of the company, or most often the characteristics of the SME-owner himself gets a lot of attention, for example his track-record. The strategy of the company is considered by the SME-owner and his adviser when they choose a costlier option, because they plan another investment in the near future. For example, in most instances leasing material is more expensive than a bank loan. However, for a bank loan collateral is needed. When an SME-owner needs a car now and wants to invest in a shop later, the most strategic option would be to lease the car so that later the investment in the shop can be made with help of the bank.

This kind of order is in line with [Guercini \(2012\)](#) who suggests that there are specific heuristics and more general rules, depending on the sort of questions. In determining the

finance solution, advisers use specific and distinctive heuristics. With a simple rule, a leading and often implicit rule becomes guideline in the decision-making process; an adviser tends to think that every case that looks more or less similar has to be solved in a similar way. They have some simple rules with a general nature also. For example, certain financial products fit certain sectors (real-estate companies use mortgages, transport companies use leasing). However, it can be questioned if these kinds of decision-making rules with a general nature fit the definition of heuristics. Within the approach of Bingham and Eisenhardt, it could be possible. They detect heuristics on a rather abstract, strategic level, where Gigerenzer focusses more on specific situations. Another suggestion could be that the five simple rules together are a heuristic with a general character with which advisers thereafter make decisions using specific simple rules. First, they try to understand general characteristics and then they come to specific solutions.

Financial advisers to SMEs seem to have a rather similar idea of what their role is, how they should work and of what clients and others expect of them. They speak a more or less similar language, to use a metaphor. Individual experiences are shared to a certain extent. A certain ecological rationality occurs, a serious level of consistency even though regulation about the profession does not exist. Our results suggest that the ecological rationality has a collective and sequential character.

The advisers interviewed used certain simple rules, although most of them needed an interview to become aware of the rules they used. Most decisive determinant for the rules is previous working experience. The vast majority of the advisers has a long history in banking. Bank financing therefore dominates their advice.

As such, we contribute to current literature in four areas. First, we detect five simple rules that seem to have some characteristics of a heuristic. These five simple rules advisers use seem to have a role in the process of satisficing (Artinger *et al.*, 2015). At a very general level (Guercini, 2012), in the first introductory meeting with their client, the advisors try to understand how they can advise a potential client. A certain search rule seems to develop here and is related to a certain level of aspiration and a search through financing options.

Based on our data, it can be suggested that the decision-making processes start with satisficing rules, then pattern recognition seems to occur – did I experience this earlier? – and a search for similarities begins – what was my solution then and is this situation different? The insights are combined again in a process of satisficing. Will the client accept a suggestion? An advisor stops when the first suggested approach meets a certain aspiration level (The stopping rule). Based on the five rules, he makes a certain decision (decision rule). Here, it is critical that there is a limit to the advice costs. There is no financing agreement yet, and if an agreement is possible it should be within certain limits. The adviser cannot spend much time (much money) on a small deal, for example a small loan. Also, time pressure is relevant here. As such, the building blocks of a heuristic become visible (Gigerenzer and Todd, 1999). Not all information is on the table so “the less is more rule” counts. Also, previous experiences dominate at this moment. Our analyses suggest that the classes of managerial heuristics (Artinger *et al.*, 2015) seem to occur in practice, although our exploratory research uncovers also some difficulties in classifying separate heuristics in practice as it seems that more than one heuristic at the time is used by advisers in the different phases of the advice process.

Our second and third contributions are related to the influences that shape these rules, the role of ecological rationality. As has been said, previous working experiences are very dominant. In addition to previous experiences, the company for which the adviser works, matters. This is related also to the different views financial advisers have on the abilities of financing instruments. This is particularly the case with non-bank financing. On the basis of the personal experiences of financial advisers, there are in fact many conflicting opinions on non-bank financing. This applies, for example, to crowdfunding and factoring. Even when

conditions are similar, one SME adviser will see it as an attractive financing instrument, while another will have reservations about the costs and the risks involved and the chances of success. The influence of the organisations for which advisers work can be related to insights offered by [Bingham and Eisenhardt \(2011, 2014\)](#). An organisation's business model determines the approach that the financial advisers working there, take.

This brings us to a fourth contribution, which is related to pattern recognition and the role of heuristics. Within pattern-recognition, the role of previous experiences but also environmental factors is dominant, as is displayed in the example in the paragraph above. However, some distinctions can be made here, which suggests something about ecological rationality. For example, when advisers are part of a (franchise) organisation, their approach differs slightly. Some (franchise) organisations support a hit-and-run way of working – quick financing advice with relatively few hours spent on giving advice. Other organisations that provide financial advice, look at the longer term, and build up a long-term relationship with the entrepreneur. More hours are spent giving advice – and thus higher costs are incurred – than in a hit-and-run way of working. Also, their individual attitude to financial products and their assessment of the strategy of their clients differs. The type of company the advisers work for and the maturity of the company they advise influences their decision-making, which suggests that the ecological rationality is related to the organisational structures they work in.

Various outcomes are relevant to develop further. To better understand the distinctions between various classes of managerial heuristics, more attention of verbal rules is necessary in research ([Artinger et al., 2015](#)). Most often heuristics are studied in experimental settings. Our results suggest that the day to day context of decision makers various classes seem to be entangled, given the complex environments with limited formal rules – such as regulation, organisational procedures and standard market practices – and little time for decision-making. Also interesting is that the advisers hardly seem to be aware of their simple rules. Neither they are aware that their decisions are driven by their professional background and previous working experience.

Another area that needs further research is the role of agency issues in heuristics. At a certain moment, advisers discover that certain behaviour helps them to achieve their goals and they develop simple rules to do that as effective as possible also for *themselves* and not only for their clients. Where the literature suggests that the less is more principle enables to make “better” decisions, we demonstrate that “better” can consist of a wide variety of possibilities, depending on the perspective taken. The simple rules used by advisers can sometimes be effective for themselves, but it can be questioned whether they always lead to a better decision in economic terms. It can also be questioned whether it is always better for their clients. For example, advice to finance internally can be economically justified, and the best advice for an entrepreneur will not always lead to income for the adviser. Agency issues seem to occur here. Agency issues also seem to relate to the general or more specific character of heuristics. It can be suggested that heuristics with a more general purpose serve a broader group of people involved, or that it is less clear whose interest is leading.

Our research has several limitations. First, it is an exploratory study in which it was not possible to ask respondents directly about their preferences, because that could have led to “correct answers”. We started with a descriptive method. Because of this strategy, it was difficult to test a theory by stating propositions ([Yin, 1994](#); [Eisenhardt and Graebner, 2007](#)). This made us decide for a more inductive approach in which we combined a quantitative strategy with some narrative (quotes), following [Langley \(1999\)](#).

Our study has tried to grasp a complex and dynamic process in an open manner. The main approach in our data-gathering was asking practitioners about their day-to-day work. It led to a large dataset that was difficult to relate to theory. This complexity can have threatened the reliability of our study. There seems to be a challenging trade-off between coming close to

practice and sound research methodology. Also, the use of various interviewers can be seen as a limitation of this study. Close deliberations between the researchers and systemic analyses of the data using Atlas.ti only partly enabled us to deal with this weakness.

Concluding remarks

We have tried to make explicit heuristics within a certain context, the relationship between ecological rationality and heuristics of financial advisers to SME's in the Netherlands. In developing this rationality, previous experiences seem to dominate (e.g. [Artinger et al., 2015](#)). Within the decision-making process, advisers have some dominant simple rules that determine the solutions they offer. There are several economically "rational" solutions. An economically sound solution for the SME adviser – from which they derive their income, and which satisfies their client – does not have to be the financially best solution for the client. Sometimes time (speed) is more important (an entrepreneur may need funds quickly because, for example, the continuity of the business is at risk), and sometimes the adviser is able to spend only a very few hours on a recommendation, with the result that they cannot find the optimal solution. These are all reasonable, logical economic reasons. Apparently, the sort of economic rationality depends on the context in which people live.

It seems that this process of satisficing ([Simon, 1965](#); [Artinger et al., 2015](#)) in financial advice given to SMEs is critical, simply because it is difficult to understand all the possibilities and to weigh them all up *in toto*. The hours are limited, the client needs to know, and their satisfaction is more important than optimal financing. How these considerations affect each other will require further study. The process of satisficing deserves more attention in future research. This is in line with some theoretical exploration of heuristics (e.g. [Bryant, 2007](#); [De Boer, 2017](#)).

References

- Akerlof, G.A. and Shiller, R.J. (2010), *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism*, Princeton University Press, Princeton.
- Artinger, F., Petersen, M., Gigerenzer, G. and Weibler, J. (2015), "Heuristics as adaptive decision strategies in management", *Journal of Organizational Behavior*, Vol. 36 No. S1, pp. S33-S52.
- Barberis, N. (2018), "Richard Thaler and the rise of behavioral economics", *The Scandinavian Journal of Economics*, Vol. 120 No. 3, pp. 661-684.
- Beck, T. and Demircuc-Kunt, A. (2006), "Small and medium-size enterprises: access to finance as a growth constraint", *Journal of Banking and Finance*, Vol. 30 No. 11, pp. 2931-2943.
- Berger, A.N. and Udell, G.F. (1998), "The economics of small business finance: the roles of private equity and debt markets in the financial growth cycle", *Journal of Banking and Finance*, Vol. 22, pp. 613-673.
- Berger, A.N. and Udell, G.F. (2006), "A more complete conceptual framework for SME finance", *Journal of Banking and Finance*, Vol. 30 No. 11, pp. 2945-2966.
- Bingham, C.B. and Eisenhardt, K.M. (2011), "Rational heuristics: the 'simple rules' that strategists learn from process experience", *Strategic Management Journal*, Vol. 32 No. 13, pp. 1437-1464.
- Bingham, C.B. and Eisenhardt, K.M. (2014), "Response to Vuori and Vuori's commentary on 'heuristics in the strategy context'", *Strategic Management Journal*, Vol. 35 No. 11, pp. 1698-1702.
- Bryant, P. (2007), "Self-regulation and decision heuristics in entrepreneurial opportunity evaluation and exploitation", *Management Decision*, Vol. 45 No. 4, pp. 732-748.
- Cassel, C., Denyer, D. and Tranfield, D. (2006), "Using qualitative research synthesis to build an actionable knowledge base", *Management Decision*, Vol. 44 No. 2, pp. 213-227.

-
- Chittenden, F., Hall, G. and Hutchinson, P. (1996), "Small firm growth, access to capital markets and financial structure: review of issues and an empirical investigation", *Small Business Economics*, Vol. 8, pp. 59-67.
- Davis, J.P., Eisenhardt, K.M. and Bingham, C.B. (2009), "Optimal structure, market dynamism, and the strategy of simple rules", *Administrative Science Quarterly*, Vol. 54 No. 3, pp. 413-452.
- De Boer, L. (2017), "Procedural rationality in supplier selection: outlining three heuristics for choosing selection criteria", *Management Decision*, Vol. 55 No. 1, pp. 32-56.
- Eisenhardt, K.M. and Graebner, M.E. (2007), "Theory building from cases: opportunities and challenges", *Academy of Management Journal*, Vol. 50 No. 1, pp. 25-32.
- Eisenhardt, K.M. and Sull, D.N. (2001), "Strategy as simple rules", *Harvard Business Review*, Vol. 79 No. 1, pp. 106-119.
- Evensky, A.I.F. (2018), "How Nobel laureate Richard Thaler's work impacts financial planning", *Journal of Financial Planning*, Vol. 31 No. 1, pp. 40-41.
- Frank, M.Z. and Goyal, V.K. (2003), "Testing the pecking order theory of capital structure", *Journal of Financial Economics*, Vol. 67 No. 2, pp. 217-248.
- Fraser, S., Bhaumik, S.K. and Wright, M. (2015), "What do we know about entrepreneurial finance and its relationship with growth?", *International Small Business Journal*, Vol. 33 No. 1, pp. 70-88.
- Gigerenzer, G. and Gaissmaier, W. (2011), "Heuristic decision making", *Annual Review of Psychology*, Vol. 62, pp. 451-482.
- Gigerenzer, G. and Marewski, J.N. (2015), "Surrogate science: the idol of a universal method for scientific inference", *Journal of Management*, Vol. 41 No. 2, pp. 421-440.
- Gigerenzer, G. and Todd, P.M. (1999), "Fast and frugal heuristics: the adaptive toolbox", in *Simple Heuristics that Make Us Smart*, Oxford University Press, Oxford, pp. 3-34.
- Groner, R., Groner, M. and Bischof, W. (1983), *Methods of Heuristics*, Routledge, London.
- Guercini, S. (2012), "New approaches to heuristic processes and entrepreneurial cognition of the market", *Journal of Research in Marketing and Entrepreneurship*, Vol. 14 No. 2, pp. 199-213.
- Guercini, S. (2019), "Heuristics as tales from the field: the problem of scope", *Mind and Society*, Vol. 18 No. 2, pp. 191-205.
- Guercini, S., La Rocca, A., Runfola, A. and Snehota, I. (2015), "Heuristics in customer-supplier interaction", *Industrial Marketing Management*, Vol. 48, pp. 26-37.
- Kahneman, D. (2002), "Maps of bounded rationality: a perspective on intuitive judgment and choice", *Nobel Prize Lecture*, Vol. 8, pp. 351-401.
- Kang, M. and Park, M.J. (2019), "Employees' judgment and decision making in the banking industry: the perspective of heuristics and biases", *International Journal of Bank Marketing*, Vol. 37 No. 1, pp. 382-400.
- Kumar, S. and Rao, P. (2015), "A conceptual framework for identifying financing preferences of SMEs", *Small Enterprise Research*, Vol. 22 No. 1, pp. 99-112.
- Langley, A. (1999), "Strategies for theorizing from process data", *Academy of Management Review*, Vol. 24 No. 4, pp. 691-710.
- Lee, J. and Marlowe, J. (2003), "How consumers choose a financial institution: decision-making criteria and heuristics", *International Journal of Bank Marketing*, Vol. 21 No. 2, pp. 53-71.
- Loock, M. and Hinnen, G. (2015), "Heuristics in organizations: a review and a research agenda", *Journal of Business Research*, Vol. 68 No. 9, pp. 2027-2036.
- Luan, S., Reb, J. and Gigerenzer, G. (2019), "Ecological rationality: fast-and-frugal heuristics for managerial decision making under uncertainty", *Academy of Management Journal*, Vol. 62 No. 6, pp. 1735-1759.
- March, J.G. and Simon, H.A. (1958), *Organizations*, John Wiley and Sons, New York.

-
- Martinez, L.B., Scherger, V. and Guercio, M.B. (2019), "SMEs capital structure: trade-off or pecking order theory: a systematic review", *Journal of Small Business and Enterprise Development*, Vol. 26 No. 1, pp. 105-132.
- Mina, A., Lahr, H. and Hughes, A. (2013), "The demand and supply of external finance for innovative firms", *Industrial and Corporate Change*, Vol. 22 No. 4, pp. 869-901.
- Modigliani, F. and Miller, M.H. (1958), "The cost of capital, corporation finance and the theory of investment", *The American Economic Review*, Vol. 48 No. 3, pp. 261-297.
- Mousavi, S. and Gigerenzer, G. (2014), "Risk, uncertainty, and heuristics", *Journal of Business Research*, Vol. 67 No. 8, pp. 1671-1678.
- Myers, S.C. (1984), "The capital structure puzzle", *The Journal of Finance*, Vol. 39 No. 3, pp. 574-592.
- Patton, M.Q. (2002), *Qualitative Research and Evaluation Method*, 3rd ed., Sage Publications, Thousand Oaks, California.
- Rauwerda, K., van Teeffelen, L. and de Graaf, F.J. (2016), "Naar MKB-advies over gestapeld financieren", *Management Control and Accounting*, Vol. 6, pp. 24-30.
- Simon, H.A. (1956), "Rational choice and the structure of the environment", *Psychological Review*, Vol. 63 No. 2, pp. 129-138.
- Simon, H.A. (1965), *Administrative Decision Making*, Public Administration Review/Macmillan, New York, New York, pp. 31-37.
- Todd, P.M. and Gigerenzer, G. (Eds), (2012), *Evolution and Cognition. Ecological Rationality: Intelligence in the World*, Oxford University Press.
- Treur, L. (2018), "Alternatieve financiering voor het MKB: nieuwe financieringsvormen goed voor miljard euro?", Rabobank Themabericht, June 2018.
- Tversky, A. and Kahneman, D. (1974), "Judgment under uncertainty: heuristics and biases", *Science*, Vol. 185 No. 4157, pp. 1124-1131.
- Van der Veen, M., Van Teeffelen, L., Ibrahimovic, I. and Lentz, M. (2015), "Mkb financiering: Behoeftonderzoek en analyse", *KvK/HU Utrecht*. doi: [10.13140/RG.2.2.20226.89287](https://doi.org/10.13140/RG.2.2.20226.89287).
- Yin, R.K. (1994), *Case Study Research: Design and Methods*, Sage Publications, Newbury Park, California.

Appendix

Appendixes of this article are included in a supplementary document which is available online.

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