

# Reflections upon the feasibility of surveys as a methodological approach in management control studies

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## Abstract

**Objective:** To discuss the methodological aspects of the survey method in the field of management control, considering situations in which structuring a database is a challenge, in addition to establishing a relationship with respondents, managing data collection, considering the logic of the research community, and ensuring information reliability. Motivation accrues from the need to develop and improve this approach considering the difficulties faced in the investigation process given a lack of data.

**Method:** Considering the discussion of methodological aspects, action research was adopted, having as the background a survey intended to address the planning and control process of family businesses.

**Results:** Attention is drawn to the following: (i) the importance of establishing the target-population and sample, choosing inclusion criteria, and the means to access companies; (ii) operationalization of data collection, in which the need to communicate and sensitize the respondents was observed; and (iii) the logic of research community, associated with the establishment of and compliance with a research contract.

**Contributions:** This study discusses the feasibility of surveys and proposes solutions for problems. Regarding its impact, studies not conducted due to a lack of responses from a given field can be proposed and discussed, promoting improved knowledge within the community. The authors expect that the knowledge presented here is helpful for studies facing similar situations.

**Keywords:** Survey method; Methodological Approach; Management Control.

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## 1. Introduction

The research environment in the field of applied social sciences developed overtime from the hard science paradigm. The starting point was natural, like accommodating a field within the scientific universe. However, for a long time, it was linked to the advancement of a logic that did not fully meet the researchers' demands in applied sciences. Saunders, Lewis, and Thornhill (2019) considered that business research absorbed philosophical and methodological perspectives from various sources (such as natural, social, applied, and human sciences), which results in the multiple perspectives adopted by the current business field.

Even though, universally, researchers demand scientific research rigor (Merchant, 2012), translating what rigor means demands an overview of the context to which research is useful. Therefore, while some methodological solutions are unacceptable in some fields, they may be reasonable in others. For instance, some fields of knowledge such as engineering, medicine, or even finance, adopt 'strict' criteria for representatively sampling a population, aiming to generalize the results; however, lack of information regarding a given population or aspects that would support sampling in other fields, demands this process be flexible and adapted. Flexibility does not imply giving up scientific rigor; it means customizing rigor, considering the actual context and its possibilities. The logic of knowledge generation itself changes in dimension and does not uniquely depend on a quantitative perspective (Ketokivi& Choi, 2014).

Even though this research problem may be useful in applied social sciences as a whole, this study was developed within the Management Control field. Seminal authors from the management control field have questioned this context (Shields, 2015; Merchant, 2010). According to Merchant (2010, p. 119), "Some important research traditions (e.g., historical analysis, field research, survey research) are being starved out of the accounting academy." Therefore, relevant studies that could influence environments are no longer performed or disseminated unless they overcome the critical challenges imposed on research (Shields, 2015). While the literature in the methodological field reports advantages and limitations specifically related to each method (Smith, 2019), gatekeepers (journal editors, referees) have been skeptical and critical of some methods, such is the case of the design and implementation of surveys (Speklé& Widener, 2018). Van der Stede, Young, and Chen (2006) stress that criticism is not directed to the survey method itself but rather how it unfolds in practice.

Studies in the literature addressing the use of surveys in the accounting and business fields report different views. Mac Lennan and Avruchir (2013), for instance, highlight that replicating surveys is interesting to increase the reliability of previous research, including making these databases available. Other authors, such as Freitas, Oliveira, Saccol, and Moscarola (2000) and Carneiro and Dib (2011), note some advantages and disadvantages of surveys. Many studies are conducted online so that sampling errors, non-response, and even ethical issues should be mitigated without costing research success (Carneiro& Dib, 2011). Given the characteristics of data, the problem seems to be that, in the case of some research topics, either this method is used to collect data or no study will be performed otherwise.

When considering the difficulties of implementing a survey, the first reaction would be discussing scales, sample size, the structure of the population, randomness, and even the concept of generalization (Van der Stede, Young, & Chen, 2006; Speklé& Widener, 2018; Smith, 2019). However, the difficulties start much earlier, such as accessing the target-population and executives facing time constraints to participate in surveys (Van der Stede *et al.*, 2006; Saunders *et al.*, 2019). In other words, to develop statistical analysis, data need to be obtained, which depends on the population structure and sampling (Saunders *et al.*, 2019).

Many researchers use the same databases over the years (e.g., *Revista Melhores e Maiores, Valor 1000, Estadão*), which list approximately 2,000 companies. If on the one hand, there are various studies and results regarding this same set of companies, on the other hand, Brazilian companies are on the researchers' radar, but their specificities are not perceived or treated, as is the case of family businesses (Bressan, Schiehl, Procianny, & Castro, 2019). Consequently, both the assertiveness of studies' contributions may have their relevance restricted because the methodological approach inevitably departs from traditional approaches.

The development of organizations in an environment in which the word 'rupture' demands solutions for problems in which data are not available, imposes a dilemma for researchers between addressing a topic in which there is a difficulty in obtaining and treating data, as opposed to continuing studying already solved problems (Shields, 2015; Lindsay, 2018; Merchant, 2012). Likewise, within research, disruptive or incremental innovation opposes the *status quo* (Merchant, 2012; 2010; Ribeiro, 2014). In this sense, identifying solutions to access, collect, and treat data is essential for developing field knowledge (Speklé & Widener, 2018; Hiebl & Richter, 2018). Therefore, the "quality" of information is essential, which is difficult to perceive if not discussed and planned.

Therefore, if, on the one hand, a survey enables collecting primary data, which are useful to obtain knowledge regarding Brazilian companies, on the other hand, a lack of information to map and structure the desired population becomes an obstacle to the method. Hence, the study's problem consists of having adequate data to conduct surveys, if it will allow advancing the discussion of little developed or seldom addressed problems within the Brazilian context. Thus, the following research question is proposed: How to treat dilemmas to enable the use of surveys? This question is supported by five questions that operationalize the analysis and propositions.

Therefore, this study aims to discuss methodological aspects of surveys within the management control field, considering the dataset structure, the relationship with respondents, management of data collection, sense of research community, and information reliability. This study is justified due to the need for an inward perspective regarding organizations, the type of information required, which is unavailable, in which proxies do not bring comfort to researchers, or a supposedly long-term and rewarding relationship.

In terms of innovation, the result of reflections and identification of proposals for problems, action research stands out, to analyze methodological elements by using a research approach in which contextual solutions were identified and gathered to the study process. According to Tripp (2005), in addition to supporting information and decision-making, action research has the potential to improve practice, which is the purpose here. Additionally, it enables examining current theoretical propositions to seek new theoretical possibilities to explain reality (Lodi, Thiollent, & Sauerbronn, 2017). This is so because action research can be used to understand problems, implement, and assess solutions (Coughlan & Coughlan, 2002) to implementing surveys. This study's background, the field considered by one group of the management accounting field, concerns family businesses' planning and control process. This study's impact accrues from identifying alternatives to implement surveys to support new studies addressing relevant topics.

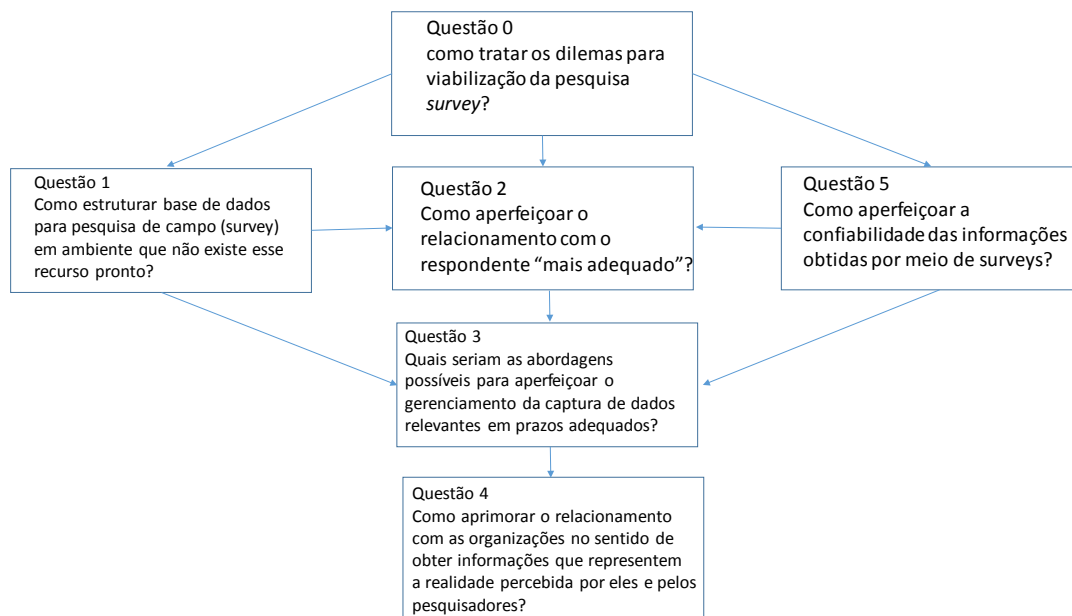
More specifically, this study contributes by proposing a conceptual structure for future surveys to (i) identify the structure of population databases to allow the development of research, its contributions, and uses legitimated by the community; (ii) reflect and discuss challenges involved in the design and operationalization of data collection; (iii) draw attention to the need of establishing a research community to enable sustainable environment for the continuity of research from this perspective.

This paper is organized into five sections, including this introduction. Section two presents reflections regarding the survey approach in studies conducted in the management control field based on Brazilian and international studies, while section three provides clarification on the use of action research as a methodological approach. Section four presents the analysis and discussion of the guiding questions, assessing the observations reported by the literature and the interventions implemented in the specific empirical context in which a survey was implemented among Brazilian family businesses—finally, section five addresses this study’s primary findings, reflections and solutions for future research.

## 2. Considerations regarding the survey method without management control

Survey studies are widely used in applied social sciences due to the ability to effectively gather relevant information, unavailable otherwise (e.g., perceptions, feelings, opinions, facts, etc.), from a target-group according to a given research objective (Dillman, Smyth, & Christian, 2014; Saunders *et al.*, 2019). In most cases, surveys are used to test or refine theories, collecting potential data, and performing analysis, which results in expanded academic and business knowledge (Bisbe, Batista-Foguet, & Chenhall, 2007; Speklé & Widener, 2018; 2020). Using available data such as proxies enables addressing specific research problems, but this is not always the case, and primary information can be a qualitative differential and contribute to the reliability of improved knowledge (Saunders *et al.*, 2019).

The umbrella question that enables reflecting upon the topic’s elements addressed here is **How to treat dilemmas to implement surveys?** Strictly speaking, it promotes a reflection and the identification of issues concerning the operationalization of research. The questions that unfolded from this umbrella question are presented in figure 1 and further explored below.



**Translation:** Question 0 – How to treat dilemmas to implement surveys? Question 1 – How to structure a database for field research (survey) in an environment where this resource is not readily available? Question 2 – How to improve the relationship with the “most suitable” respondent? Question 3 – What are the potential approaches to promptly improve the management of relevant data collection? Question 4 – How to improve relationships with organizations to obtain information regarding the reality the respondents and researchers perceive? Question 5 – How to improve the reliability of information obtained through surveys?

**Figure 1.** Summary of the questions addressed.

Despite technological advancement, the current research context aggravates the difficulty of implementing surveys, and the low response rate is a fact. Even though previous studies attempted to provide insights on how to solve survey implementation problems, some questions remain, mainly when focusing on the management control of family businesses. A survey is intended to capture managers' profiles, the essence of organizations, and the processes the individuals experience. This task is even more challenging when the companies investigated are family businesses, about which there is no previous database to access. Understanding the need for a survey due to the type of data required, some problems emerge like sampling and the survey's role considering the study objective (Van der Stede *et al.*, 2006). Thus, dimensioning the size of the target population is a complex task. Consequently, the following questions are proposed: **Question 1 – How to structure a database for field research (survey) in an environment where this resource is not readily available?**

In addition to the aspects related to population and sample, another difficulty is to define and find the most suitable respondents for a survey. This is something that bothers researchers; the level of control is debatable, and the type of concession that does not affect a study's final product is in the researchers' minds. Hiebl and Richter (2018) discuss the hierarchical level issue, and the response rate is another part of the equation (Hartmann & Slapničar, 2012). Due to this topic's importance, the following question is proposed: **Question 2 – How to improve the relationship with the “most suitable” respondent?**

Many strategies can be used during data collection within a survey, such as mail, telephone calls, e-mail, and the Internet. Each platform has its advantages and disadvantages (Smith, 2019; Saunders *et al.*, 2019). Compared to traditional research methods, online surveys present many advantages, among which the fact that questionnaires are delivered faster, at a lower cost, there are more design options, and questionnaires are returned faster. However, online surveys also face specific challenges, such as missing data and low response rates, leading to biased results (Couper, 2000; Fricker & Schonlau, 2002; Hiebl & Richter, 2018).

Considering that response rates in online surveys is a concern for researchers, Fan and Yan (2010) and Keusch (2015) developed a conceptual model using systematic reviews to find the factors that influence response rate, both during the study development, when delivering the questionnaires and in the conclusion and feedback stages. The authors found that a successful survey is significantly influenced by factors such as the number of topics addressed, time required to answer the questionnaire, the instrument's format and design, and how easily the questionnaire link is accessed in different web browsers and devices.

In addition to the quantitative aspect of data collection, the number of results available, there is the qualitative aspect, which does not always go hand in hand. The literature reports some challenges; for instance, Cychota and Harrison (2006) state that a set of measures such as obtaining prior consent, carrying out a follow-up, sending reminders, and customizing communication were not effective in ensuring response rate among top-level executives. On the other hand, Hiebl and Richter (2018) suggest previously contacting potential respondents, using non-random samples, and focusing on lower-level managers.

Surveys are one of the quantitative approaches most frequently adopted in management accounting research, and the number of useful responses and high response rates are essential aspects to consider in this method (Hiebl & Richter, 2018). In a study addressing 140 papers published in high-impact journals, however, Hiebl and Richter (2018) verified a downward trend among the response rates of studies conducted in recent years in the management accounting field. They also found that population size, the region where the study is conducted, scales, respondents' hierarchical level, the subject addressed, random sampling techniques, and whether the population was contacted before the questionnaires were sent are significantly associated with response rate and the studies' success.

Therefore, **Question 3 – What are the potential approaches to promptly improve the management of relevant data collection?**

A survey is not something cold, neutral, or without impact on society, but something that affects the lives of agents and they react to stimuli. One way to look at it is to consider its social impact (or how it should impact) on the community (Nicolai & Seidl, 2010). Giving the respondents the proper conditions to understand the survey is part of a researcher's task. Without approximating the academia to the field, research will no longer address relevant aspects; neither the society will understand them (Shields, 2015; Lindsay, 2018; Merchant, 2012), which lead us to **Question 4 – How to improve relationships with organizations to obtain information regarding the reality the respondents and researchers perceive?**

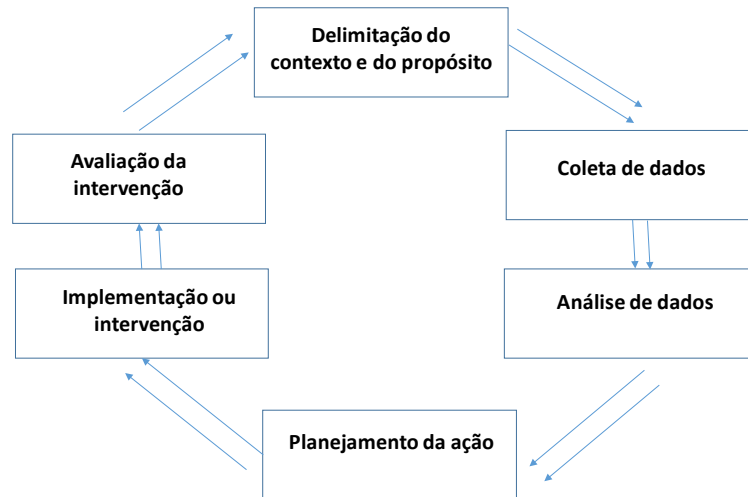
Response reliability is another essential but complex issue to solve (Van der Stede *et al.*, 2006). It can be addressed from different angles: non-sampling error, non-response error, response error, and social desirability bias, among others (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Van der Stede *et al.*, 2006; Speklé and Widener, 2018). Indeed, many researchers using surveys as a methodological approach consider the extent to which errors and biases compromise their findings and conclusions. This is a critical consideration and, in general, permeates the other guiding questions, which leads us to **Question 5. How to improve the reliability of information obtained through surveys?**

Note that these issues are discussed in books and papers with a methodological focus (e.g., Van der Stede *et al.*, 2006; Saunders *et al.*, 2019; Smith, 2019). Therefore, the purpose of this paper is not to provide basic knowledge regarding the design and implementation of surveys, but to contribute with proposals identified, customized, and employed in a survey addressing the planning processes of family businesses, discuss critical issues experienced in the process, and share concerns with other researchers from the management control field (Van der Stede *et al.*, 2006; Speklé & Widener, 2018; Hiebl & Richter, 2018).

### 3. Study design

This study was conducted by interacting with the field. An inductive approach was used, inspired in action research (Coughlan & Coughlan, 2002; Thiollent, 2009), which strongly interacts with the field, especially with emerging topics in which knowledge of the context may bring relevant contributions.





Translation: Understanding context and purpose. Data gathering .Data Analysis. Action planning. Implementation/Intervention. Evaluation

**Figure2.**Dynamics of the model proposed by Coughlan & Coghlan (2002).

Source: adapted by Coughlan, P., & Coghlan, D. (2002). Action research for operations management. *International Journal of Operations & Production Management*, 22(2), pp. 220-240.

Figure 2 shows the dynamics of the model proposed by Coughlan and Coghlan (2002), which includes the following stages: **Understanding context and purpose**, which in this study consists of a survey among family businesses. The survey’s objective was to address the planning process of Brazilian private family businesses of different sizes. According to the topic, target respondents included family members and top-level managers, preferably those in administration, controllership, and finances.

All the stages and decisions concerning this survey’s design and implementation grounded this study. **Data gathering** refers to evidence and notes taken from the periodical meetings held throughout the intervention and the monitoring of responses. **Data Analysis** involves the exchange of information between researchers and companies to understand, for instance, why the respondents accepted to participate in the study and how they perceived this interaction between academia and businesses. **Action planning** comprises the interventions that led to the use of other approaches in addition to those initially planned. The **Implementation/Intervention** includes establishing the target population, videos to invite potential respondents, changing the format of invitations and reminders (follow-up), and identifying respondents, among other strategies.

In the **Evaluation** of the data collection process, the researchers regularly discussed the partial results the strategies enabled in terms of the number of responses obtained, the reliability of the answers provided to the questionnaires, and also considered ethical and technical aspects. These strategies were recorded and monitored by the researchers to reflect upon the results, as recommended in action research (Coughlan & Coghlan, 2002; Thiollent, 2009; Kemmis, McTaggart, & Nixon, 2014).

The action research stages were adopted in this study and applied to each of the five guiding questions. The following were discussed for each of the following: (i) What does literature says and what is the gap in the field? How does it materialize and what are its limitations?; and (ii) the identification and discussion of contributions based on empirical evidence.

#### 4. Analysis and discussion of the guiding questions

Five guiding questions were proposed in this study and are discussed next.

**Question1.** How to structure a database for field research (survey) in an environment where this resource is not readily available?

##### What does the literature say and what is the gap in the field?

Not having available a dataset with the characterization of the target population with the profile desired impedes some types of studies. According to the Brazilian Institute of Geography and Statistics (IBGE –2019), the population of medium and large companies (above 250 employees) is more than 85,000. Most of these companies are unavailable because of a lack of information such as name, region, and contacts. For this reason, these companies are not addressed by studies in the management control field.

The field of applied social sciences is often criticized due to the little use of random sampling techniques to address populations (Landers & Behrend, 2015; Smith, 2019). The question is whether randomness meets the purpose and can contribute to the quality of information required by the different research problems and interests. In Brazil, for instance, replacing Itaú-Unibanco by Bradesco or by Banco do Brasil or yet, Santander based on randomness does not make any sense considering the differences in terms of organizational structure, strategies, and behavior.

When analyzing sampling techniques used by studies in management control, Van der Stede *et al.* (2006) identified a predominance of non-probabilistic methods, mainly convenience samples (approximately 70% of the studies). Convenience samples are a common strategy used when the population is unknown, i.e., there is a lack of a suitable database of potential companies and respondents.

Considering that studies from the management control field widely use convenient samples, Speklé and Widener (2018) suggest differences in this approach in descriptive studies and theory-testing studies. According to Speklé and Widener (2018), descriptive studies should pay greater attention to the generalization of results obtained from a given population sample and, for this reason, demand probabilistic sampling techniques (Van der Stede *et al.*, 2006).

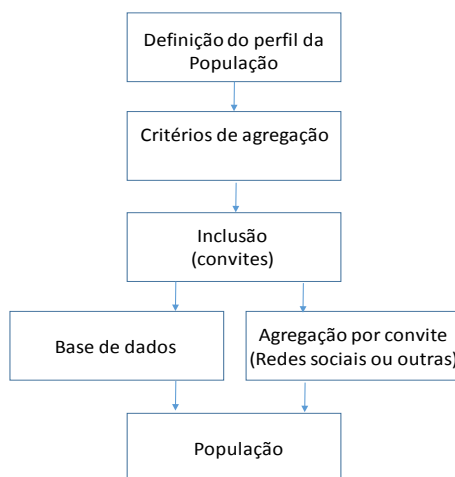
Theory-testing studies require a relevant sample of the individuals or organizations to which a given theory applies; thus, concerns regarding sampling fall on coverage bias. Coverage bias is verified when the initial list (sampling frame) does not cover the target population (Speklé & Widener, 2018).

##### Identification and discussion of contributions based on empirical evidence

The sampling frame can start with identifying the databases available, to which companies with different profiles can be added. Note that the sampling frame does not need to be random, or perhaps should not be completely random or simply include existing databases. In addition to the number of companies one wants to address, it is necessary to take into account the type of companies desired and select their characteristics while, at the same time, minimizing coverage error. In this sense, the sampling frame needs to be aligned with the target population; that is, it needs to present the same profile of the target-population, of the group of companies and/or individuals to whom the theory applies (Van der Stede *et al.*, 2006; Speklé & Widener, 2018).



This study’s research project established this sampling frame based on family businesses stratified according to size; businesses were assigned to four groups according to different complexity levels. This stratification was chosen because the authors expected different management and control practices between companies in different organizational development stages; it was the basic criteria to establish the **population profile** (Figure 3).



Translation: Establishing the population profile .Aggregation criteria. Inclusion (invitations). Databases. Inclusion by invitation (Social media or others). Population

**Figure 3.** Structuring the study’s population.

After establishing the **aggregation criterion** used to include companies in the databases by stratifying the population, the companies’ managers were invited to participate in the study (see Figure 3). Because it is a different heterogeneous composition, in which companies’ data are not included in available databases, the researchers decided to send **invitations** according to two strategies: first, by inviting the participants of previous studies, considering the small, medium, and large-sized companies, of durable and non-durable goods (**database**); and secondly, by **inviting** potential respondents, other than top-level managers, with active profiles in LinkedIn® **professional network**, always paying attention to the companies’ characteristics necessary to answer the study question.

Once the desired sampling frame profile was chosen from which the sample would be recruited, data collection was initiated, and procedures will be addressed next.

**Question 2 – How to improve the relationship with the “most suitable” respondent?**

**What does the literature say and what is the gap in the field?**

The definition of the most suitable respondents to be addressed in a study considers various aspects, depending on the study’s level of analysis. If the analysis level is organizational, the respondents’ profile can be based on hierarchical levels, how long the individuals work for the company, and their level of involvement in the phenomenon under study (e.g., budgeting process). If, however, the level of the analysis is individual, then one’s background, professional experience, and individual characteristics are considered.

Some parameters are usually adopted in surveys, such as the respondents' hierarchical level, how long they work in the company, job position, and area. Hiebl and Richter (2018) consider that the higher a manager's hierarchical level, the more difficult it is to obtain answers. Studies in the management control field tend to attract financial executives, though there are studies addressing managers from other fields with relatively high response rates (e.g., Hartmann & Slapničar, 2012). It is important to note that: (i) having a suitable respondent profile can impact a study's response rate; (ii) often, the target profile is not possible to be delimited/approached; or even (iii) accessing respondents is not always feasible. Hence, researchers are supposed to establish the response error that is acceptable from an empirical and theoretical perspective.

The suitable respondent may depend on knowledge, experience, hierarchical level, position within the structure, and the acceptable level of bias. There may be situations in which the survey may require more than one respondent per company to meet the study's scope (e.g., Madison, Kellermanns & Munyon, 2017).

### Identification and discussion of contributions based on empirical evidence

Having a database of family businesses is one of the examples of a gap in research. Having information regarding different respondents is even more challenging. Consequently, the search for subjective, qualitative responses, inferences, and useful responses may lead to conclusions that do not correspond to the actual context, which could be obtained from different respondents.



Translation: Alternative inclusion criteria. Acceptable bias. Access to respondents. Tests to validate the aggregate. Establishing the respondents' profiles. Access to respondents. Population and sample. Indirect access to respondents

Figure 4. Suitable respondent.

This study's research project established the **target-respondent profile (Figure 4)** based on hierarchical level, considering family representatives, the president, directors, and controllers. Due to a need to treat the management control device and the company's life cycle, these executives should be well informed regarding these elements and be able to provide reliable and comprehensible information regarding the topic.

Depending on the study's needs, some alternatives can be adopted. Certain studies demand answers from the proprietors, but these contacts are often unavailable in lists or social media, and in this sense, depending on the questions, they can be directed to the executives close to the proprietors, such as directors. This argument can be reinforced with additional information regarding how long the respondent works for the company and occupies that specific position.

Not a single respondent who met the profile was found in many of the companies approached, while in other companies, especially the large ones, more than one respondent was identified. In some cases, we could not identify the target-respondent according to hierarchical level, so that **alternative inclusion criteria** were adopted (i.e., higher hierarchical level, experience in the company, and area). Based on these criteria, an **acceptable level of bias** was established. Therefore, **access to respondents** with this profile is the fundamental parameter used to include a company in the sample. These elements are presented in Figure 4.

An alternative would be establishing contact with one executive within the company who was open to research and ask him/her to intervene and connect the company's proprietor through LinkedIn®. In some cases, especially among large companies, appropriate **indirect access** was attempted through the sampling frame's contacts.

Throughout data collection, meetings were held with the respondents who accepted to discuss the study's approach and questionnaire for the research group to learn information and obtain knowledge (Kemmis *et al.*, 2014) regarding (i) the respondent's motivation to participate in the study; (ii) the format and means through which the respondent was contacted; (iii) the respondent's adherence to the research topic; and (iv) complaints or suggestions in general. It was an important stage for the **tests to validate the aggregate**, representing a qualitative analysis of the respondents' profile and more operational issues, such as whether presenting the study using a short presentation video. This last element was considered an alternative to drawing potential respondents' attention, possibly impacting the **population and sample**. It would be a more objective way to communicate the study's purpose to a group of professionals known for time constraints.

**Question 3.** What are the potential approaches to improve the management of relevant data collection promptly?

## What does the literature say and what is the gap in the field?

Researchers use different means to implement surveys, such as mail, telephone calls, and e-mail, among others (Dillman *et al.*, 2014); there was a significant increase in online studies in recent years (Fan & Yan, 2010).

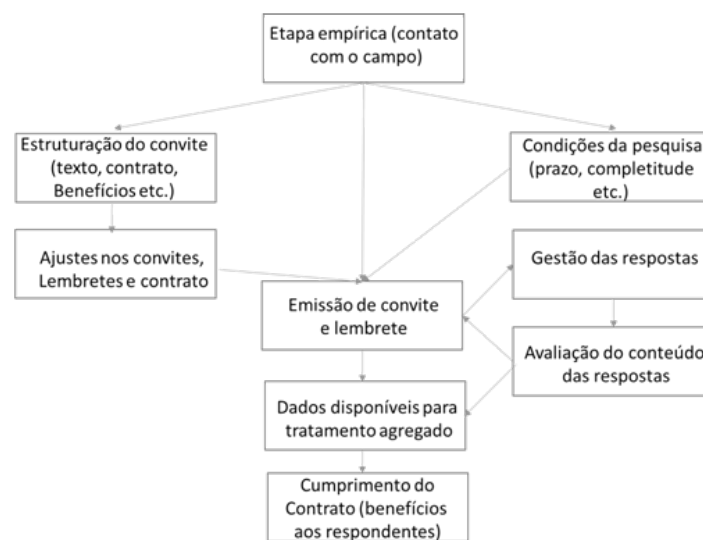
Compared to studies' traditional models, online surveys present various advantages, among which the fact that questionnaires are sent faster, at a lower cost, more design options are available, and responses are returned faster (Smith, 2019; Dillman *et al.*, 2014). Online surveys also face specific challenges, however, such as missing data and low response rate, possibly leading to biased results (Couper, 2000; Fricker & Schonlau, 2002).

Many studies attempted to reveal the factors that possibly influence the success of surveys. Cycyota and Harrison (2006), for instance, report that various techniques widely discussed in the literature, such as prior consent, follow-up and reminders, and customization were not effective in improving response rates among top-level executives. Hiebl and Richter (2018) consider that the factors influencing response rates in the managerial control field include establishing a previous contact with the potential respondents, using non-random samples, and focusing on lower-level managers.

Because low response rate among online surveys is a major concern among researchers, Fan and Yan (2010) and Keusch (2015) suggest that response rate is influenced by factors such as the number of topics addressed, time needed to complete the questionnaire, the instrument’s format and design, and how easy the questionnaire link is accessed in different web browsers. Even though many studies were developed to map strategies intended to increase surveys’ response rate, they usually present divergent results, considering this is a multidimensional and mainly conceptual discussion. Some authors highlight the critical elements of survey design and the importance of customizing the method (Smith, 2019; Dillman *et al.*, 2014), discussing how different strategies can benefit surveys regarding response quality and response rate.

### Identification and discussion of contributions based on empirical evidence

Potential respondents were contacted through the LinkedIn® professional network and by e-mail.



Translation: Empirical stage (contact with the field). Invitation development (text, contract, benefits, etc.). Invitations, reminders, and contract were adjusted. Invitation and reminder were issued. Data available to perform aggregated analysis. Fulfilling the contract (respondents’ benefits). Study’s conditions (deadline, completeness, etc.). Managing responses. Assessing the responses’ content

Figure 5. Strategies for managing data collection.

**Invitations** (Figure 5) occurred in two stages. A standardized invitation was initially sent, providing clarification regarding the study’s design and mentioning the importance of the manager’s participation. After potential respondents accepted the invitation to be included in the contact network, a more detailed message was sent with a link to the questionnaire. This message informed that an incentive/benefit would be provided in case of participation in the study, i.e., an individual and personalized report to each respondent (company). These and other aspects of the data collection process are discussed in this subsection and are presented in Figure 5.

The researchers also invited the managers of organizations that had previously participated in other studies or belonged to the LinkedIn® professional network. The managers who were already familiar with the researchers were more open to participating in the study, perhaps due to familiarity and trust. In this sense, note that these elements were part of the **invitation** (including contact between researchers and respondents).

As previously mentioned, based on the interviews held with some respondents, the researchers identified opportunities to increase the number and quality of responses. In this sense, **invitation and contract were adjusted**. An important change concerns how communication was established with potential respondents; only written communication had been used up to that point. Therefore, the researchers recorded short and objective videos explaining the study, a strategy that apparently led to increased receptivity. Another change was intensifying contact through LinkedIn®, including managers whose e-mails were available. Finally, the individual executive reports were sent to the respondents using more direct language and graphics within a month after the responses were returned. In other words, the respondent received the benefit not much longer after sending his/her contribution.

The **conditions** established in terms of **deadline** and **response** validity were monitored throughout data collection. For instance, questionnaires had to be complete. In this case, when a respondent had not finished answering the questionnaire, s/he was contacted immediately, which resulted in a lower number of incomplete questionnaires.

Regarding the **issuance of invitations and reminders**, we verified in this study that the day or time in which the invitations were sent was not relevant to obtaining responses. In addition to the invitations, reminders were sent after approximately three weeks. We believe that respondents are sensitized for not having answering an invitation and pay greater attention when reminded.

In general, each potential respondent was contacted three times, first with an invitation, then with a reminder 20 days after the invitation was sent, and finally, one last time a few days before data collection ceased. The first reminder effectively increased the number of responses; however, those who did not answer the first reminder did not answer the survey after the last call.

The researchers **monitored the responses** weekly to identify incomplete questionnaires and act promptly, assessing the reliability of responses and dubious answers in the case of more than one respondent per company, as well as the rate of adherence per each stratum of companies (clustered according to size). This assessment enabled the researchers to manage the number of answers per stratum, which also guided the preparation of the individual executive report. In terms of feedback, an executive report was developed at the end of data collection considering **aggregated data** and shared among the respondents. Note that both an individualized and aggregated perspective of the responses sensitized the researchers regarding the study's discussions. The aspects previously mentioned were disclosed within a contract signed by the respondents.

**Question 4.** How to improve relationships with organizations to obtain information regarding the reality the respondents and researchers perceive?

## What does the literature say and what is the gap in the field?

A topic increasingly and more intensively debated in scientific research concerns its social impact (or how it should impact) the community (Nicolai & Seidl, 2010). Researchers from the management control field are sensitive to this issue and have attempted to develop reflections that promote more significant social impact. One of the repercussions concerns the need to approximate the academia to the business environment (Corley & Gioia, 2011) so that research problems reflect relevant phenomena (Shields, 2015; Lindsay, 2018; Merchant, 2012).

In this sense, an important pillar in the relationship between researchers and companies' managers is the perception that scientific research can provide a relevant contribution to the professional context. Lindsay (2018) unfolds relevance into two aspects: the first is a reflection regarding practice and behaviors, and the second refers to the practical applicability of management tools. This is a fundamental aspect, and researchers have to be attentive to the study's design and communication, especially with surveys, in which there is usually a physical distance separating researchers from respondents.

Perceptions regarding the relevance of studies on the part of potential respondents depend on: the respondent's familiarity with the topic under study and practical interest in implementing a management control device in his/her organization, considering problems routinely experienced. Additionally, the respondents' perceptions may be influenced by previous contacts established with the researcher (e.g., classes, congresses, or other interactions), taking into account the image of institutions with which researchers are affiliated. Another strategy used, especially in surveys, is incentives in exchange for participation, such as donations, reports, or awards, among others (Dillman *et al.*, 2014; Smith, 2019).

These and other mechanisms are part of the contract established between researchers and potential respondents, comprising informal (trust, familiarity, image) and formal elements (invitation, questionnaire, incentives). The logic of this contract, the background of which is the study relevance, is vital to improving the relationship between researchers and organizations and developing a research community. This practice enables increasing response rate and tends to improve the quality of information, considering that managers become more motivated to answer the questions faithfully, as they assign greater value to the process. The consequence of these steps is to provide participants with information, the benefit of knowledge, as it should be the primary objective of the research.

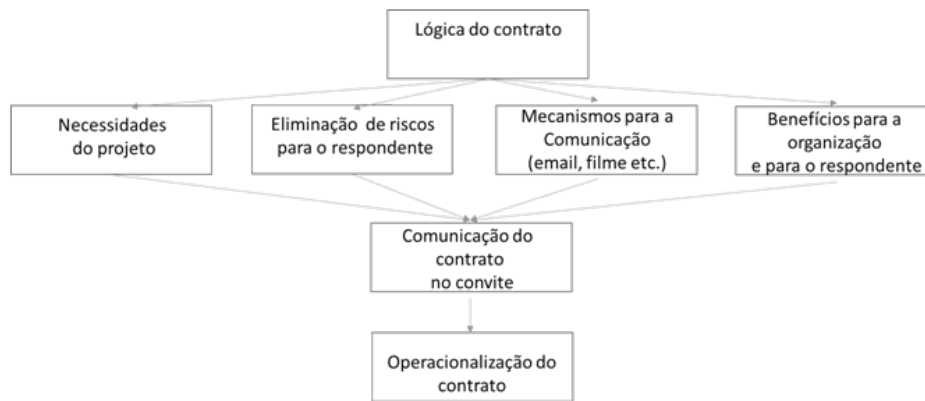
## Identification and discussion of contributions based on empirical evidence

In addition to recruiting respondents to a survey conducted at a given point in time, the researchers are also interested in future research and how to collect data promptly. Obviously, in addition to the advancement of research within the academic milieu, organizations also need to advance; after all, research in applied social sciences is developed to connect theory and practice.

Hence, by contacting the managers participating in the study, the researchers sought to establish a relationship between the companies and the academia, inviting the managers to provide their opinions, holding online meetings to address these suggestions, verifying whether the reports and invitations and even the topics addressed were pertinent. Therefore, the intention was not to simply gather a certain number of respondents but rather to establish a relationship with the companies, which can be called a research community.

This relationship with the companies was based on the **logic of the contract** established between the researchers and the potential respondents since the first contact was established through the professional platform LinkedIn® and e-mail. The concept of this study's contract is aligned with the proposed by Borgatti and Molina (2005), a contract that clearly describes the agreement established between the parties, for instance, consent to collect data, data analysis, and feedback provided to the companies. Additionally, the authors suggest the many resources and designs can improve the respondents' experience during data collection. Figure 6 presents the factors that permeate the discussion regarding the contract's logic.





Translation: Contract's logic. Project's needs. Eliminating risks to respondents. Communication mechanisms (e-mail, video, etc.). Benefits to the organization and respondent. The contract is communicated in the invitation. Operationalization of the contract

Figure 6. Relationships with organizations.

Due to the project's needs, information necessary to meet the demands of the defined construct needs to be considered. An essential element to **eliminate the respondents' risk** was to clearly identify the researchers with a profile in the LinkedIn® and/or with an institutional e-mail. Priority was given to LinkedIn® because it confers greater confidence in the researchers' and respondents' identities, that there are no viruses or spams (as it happens with e-mails), and because of the possibility to create a network of professional contacts for future interactions.

Additionally, the **communication mechanisms** used were intended to communicate the importance of the study and data analysis procedures, such as ensuring the confidentiality of the respondents' information. The invitations were sent to the individuals' professional profile, and the video-invitation and reminders somewhat approximated the researchers and respondents, strengthening ties of trust between the parties.

Note that the contract established **benefits would be provided to the respondent and organization** concerning the sharing of knowledge produced in the study. Knowledge was shared through two executive reports: the first was sent up to one month after participation, containing an individualized analysis of the company considering its organizational life cycle, crises, and managerial artifacts; and the second report was sent after data collection ceased, providing aggregated data of all the companies in the sample, enabling them to make inferences.

Specifically, the survey implemented guided this study, and the stimulus provided to recruit respondents was to provide an **individual report** to each of the respondents, waving with potential opportunities for the organization's planning; feedback was very timely. When talking to some of the respondents, they reported that the feedback was pertinent and interesting, containing graphics and accessible language. The **aggregated report** emerged from the respondents' interest in obtaining this information, which represented an implementation (Coughlan & Coughlan, 2002) that emerged from the interaction with the field, which is common after communication is established.

Some organizations are more open than others, and establishing a relationship is not immediately facilitated and perhaps not even possible after only one survey. A relationship needs to be carefully developed over time to avoid biases, though it is undoubtedly something we consider relevant for the advancement of surveys.

**Question 5.** How to improve the reliability of information obtained through surveys?

## What does the literature say and what is the gap in the field?

Another critical aspect to be discussed in terms of surveys is the procedures used to treat data during and after data collection to verify **response reliability**. Therefore, some types of bias to which surveys are subjected are addressed here. These biases accrue from the use of non-random sampling techniques such as non-sampling error and non-response bias (Van der Stede *et al.*, 2006).

First, non-sampling error derives from **non-random sampling techniques** and may lead to **non-response error** and **response error**, which respectively refer to when invited managers do not answer the survey, and when they do, their response is not appropriate (Van der Stede *et al.*, 2006). Non-random sampling error is common in studies conducted in the field of managerial control, considering that most studies do not adopt random sampling methods (Van der Stede *et al.*, 2006).

**Non-response bias** refers to the extent to which respondents differ from non-respondents in terms of generalization of results (Moore & Tarnai, 2002; Van der Stede *et al.*, 2006). The difference between non-respondents and respondents may be related to some factors, such as the characteristics of the target population (age, sex, income, education, and area of professional activity), the organization's characteristic (size, sector), or the survey's characteristics (topic, duration, etc.) Tomaksovic-Devey, Leiter, and Thompson (1994) note that authority, ability, and motivation are important factors for not responding to a survey. Authority refers to the hierarchical level of potential respondents; ability refers to knowledge and familiarity of the potential respondent to the topic and instruments, and motivation involves the interest of potential respondents in the study. Usually, non-response bias is an issue addressed in management control studies considering the statistical differences between the first and last respondents (Van der Stede *et al.*, 2006), considering that most of these studies do not have information regarding the population. Another aspect discussed by Van der Stede *et al.* (2006) refers to **item non-response**, which is treated as **missing data** and is a source of bias and may lead to validity reliability problems in measuring constructs.

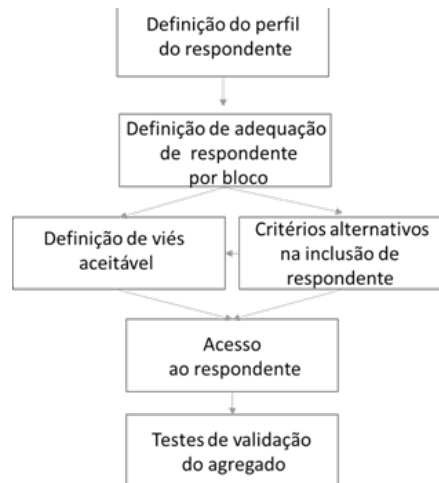
**Response-error** is present in studies using the survey approach because these use self-reported data, and thus, are conditioned to different types of biases (Podsakoff *et al.*, 2003), which include social convenience and the respondent's mood for instance (Podsakoff *et al.*, 2003). Speklé and Widener (2018) discuss two types of biases, social desirability bias, which refers to distorting responses to align to social standards, and the halo effect, which reflects a situation in which general perception influences a specific judgment.

Finally, in addition to the survey design, these aspects should be discussed after collecting data to verify the extent to which a given empirical study is subject to biases

## Identification and discussion of contributions based on empirical evidence

Empirical research followed the survey design procedures, starting with the establishment of **the target-respondent profile** in terms of hierarchical level and other complementary aspects, such as area and experience in the company. As previously mentioned, in some companies, there was not a respondent who met these requirements, and for this reason, we established an **acceptable level of bias to access respondents** (as shown in Figure 7).

Because a convenience sample was adopted, this study is subjected to response and non-response bias. **Non-response bias** may be an issue here, but it is difficult to treat; it cannot be identified if the sample has similar characteristics to the target population (due to an absence of data regarding the target population). This sort of bias cannot be diagnosed using the first and last respondents' test, considering that the invitations were sent during approximately one year, and the potential respondents were added to the sampling frame by identifying their profiles at LinkedIn®.



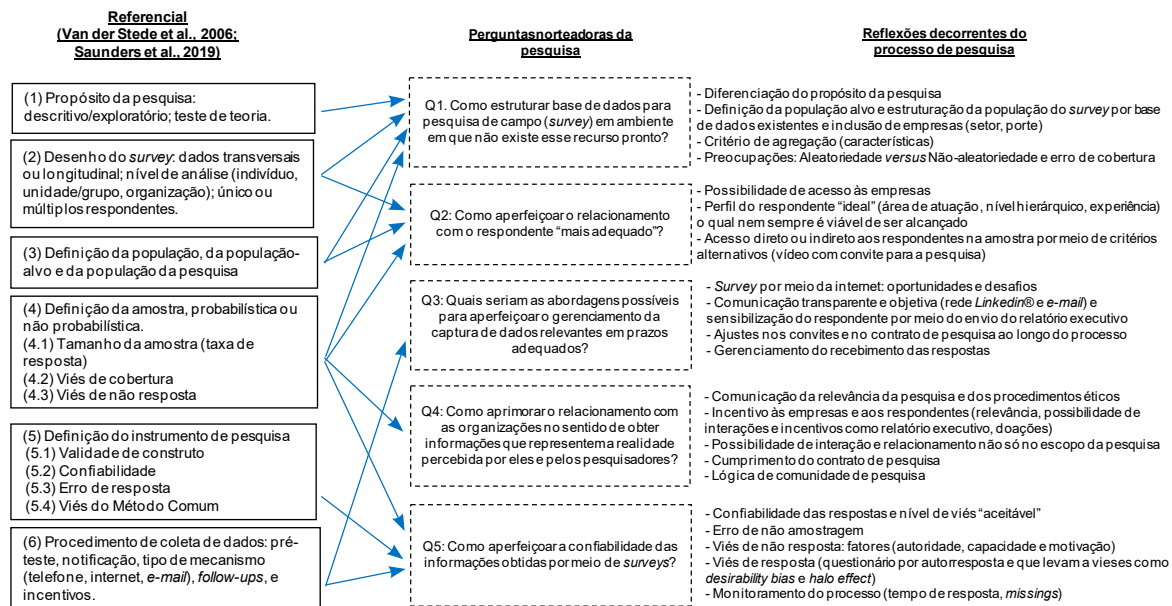
Translation: Establishing the respondents' profile. Establishing how suitable respondents were per block. Establishing an acceptable level of bias. Alternative criteria to include respondents. Access to respondents. Test to validate aggregate

**Figure 7.** Respondents' configuration

Regarding response bias, the researchers monitored the responses to screening for valid and reliable responses, discarding those suspected of low-quality responses. While attributes such as the respondent's quality regarding authority and ability to participate in the study were addressed through the survey design and identification of potential respondents, the respondents' motivation was monitored and adjusted throughout the process by changing some strategies. First, a written invitation format was replaced by a video-invitation. Second, monitoring the respondents and using reminders, also highlighting the importance of the individual executive report, decreased response bias, and missing data; thus, a database with few incomplete responses was obtained. Third, the researchers monitored whether there was more than one respondent per company, how long it took to complete the questionnaire, and situations with a specific treatment, for instance, due to the exclusion of complete questionnaires.

As presented in Figure 8, the guiding questions are aligned with survey procedures addressed by the literature, including for the management control field (Van der Stede *et al.*, 2006). The guiding questions comprised one or more of these aspects simultaneously and emerged from the literature and the survey development process conducted among Brazilian family businesses.

By reflecting upon the process of implementing a survey, various issues were discussed in this section regarding the difficulties and solutions the researchers found to, whenever possible, decrease bias and increase response reliability and response rate, in addition to considering the importance of a sense of research community. This reflective approach can be observed in each guiding question, which was intended to clarify the challenges imposed on the implementation of surveys, given the demands faced during the investigation process, whether because of a lack of data, difficulty in accessing organizations and people, or difficulty in adapting instruments to the practical context, while simultaneously observing construct validity, among others. As highlighted by Van der Stede *et al.* (2006) and Spéké and Widener (2018), despite these challenges, including acceptance on the part of the research community, surveys are crucial to advance in management accounting and applied social sciences as a whole.



**Translation:** Theoretical reference framework: 1. Study's objective: descriptive/exploratory; theory testing; 2. Survey design: cross-sectional or longitudinal data; level of analysis (individual, unit/group, organization); single or multiple respondents; 3. Establishing the target population and study population; 4. Establishing the sample, non-probabilistic or probabilistic; (4.1) Sample size (response rate), (4.2) Coverage bias, (4.3) Non-response bias. 1. Establishing the study's instrument: (5.1) Construct validity, (5.2) Reliability, (5.3) Response error, (5.4) Common method bias. 1. Data collection: pretest, reporting, means (telephone, internet, e-mail), follow-up and incentives. Guiding questions - Reflections arising from the study process: Q1 - How to structure a database for field research (survey) in an environment where this resource is not readily available? - Differentiate the study's purpose; - Establishing the target population and sampling frame based on existing data and by including companies (sector, size); - Aggregation criteria (characteristics); - Concerns: Random versus Non-random and coverage error; Q2 - How to improve the relationship with the "most suitable" respondent? - Alternatives to access companies; - Suitable respondents' profile (area of professional practice, hierarchical level, experience), which is not always achieved; - Direct or indirect contact with respondents in the sample by using alternative criteria (video-invitation); Q3 - What are the potential approaches to improve the management of relevant data collection promptly? - Online survey: opportunities and challenges; - Transparent and objective communication (LinkedIn® and e-mail) and sensitization of respondents by sending executive report; - Adjusting invitations and study contract throughout the process; - Managing response; - Communicating the study relevance and ethical procedures; - Incentives to the companies and respondents (relevance, possibility to interact, and incentives such as executive report, donations); - Interaction and relationship possibilities not only within the study's scope; - Fulfilling the study's contract; - Logic of research community; Q5. How to improve the reliability of information obtained through surveys? - Reliability of the responses and "acceptable" level of bias; - Non-sampling error; - Non-response bias: factors (authority, ability, and motivation); - Response bias (self-reporting questionnaire, which may lead to social desirability bias and halo effect); - Monitoring the process (time required to complete the questionnaire, missing data)

**Figure 8.** Considerations regarding the implementation of surveys.

## 5. Final Considerations

This study's objective was to discuss methodological perspectives of surveys based on five guiding questions addressing database structure, relationship with respondents, management of data collection, sense of a research community, and information reliability, thus, permeating the technical and ethical aspects of surveys.

The proposals are aligned to both the difficulties faced in the survey process and discussions proposed by previous studies (e.g., Van der Stede *et al.*, 2006; Spéké & Widener, 2018), the background of which was a field study developed in management control of family businesses. Methodological studies do not frequently address these problems, given the practical focus of the data collection process stages. Additionally, when the researchers participate in the process, they face many unexpected challenges, which affect the entire study design.

This study raises these questions from a critical perspective on how to conduct the data collection process using questionnaires while at the same time focusing on the literature, experiences, interventions, and learning process. This study discussed each guiding question from the action-research perspective, the background of which was a survey conducted among Brazilian family businesses of varied sizes, addressing management control practices within the organizational life cycle. Within this context, this study explored difficulties and solutions to the use of surveys to draw attention to the fact that the most suitable design may not be feasible in many cases.

This study specifically addresses: (i) the importance of establishing a target-population and sample with the problem in mind; (ii) the operationalization of data collection itself, considering attributes such as desirable respondent profile, the format of communication, and management of the data collection process; and (iii) the importance of considering the logic of research community, which considers the establishment of and compliance to a research contract. Therefore, an inward perspective of research itself provides the means to reflect upon and improve surveys, to advance in studies addressing relevant topics, seldom explored thus far, considering the challenge of obtaining data.

This study is expected to promote a reflection and suggest solutions to other researchers using surveys as the primary methodological approach to collect data. Surveys are a method widely used in the field of management control. Thus, recent studies have attempted to reflect upon its role, limitations and to consider alternatives to expand its acceptance in the research field (Speklé & Widener, 2018; Hiebl & Richter, 2018). Therefore, this study contributes to the literature, by sharing reflections regarding the Brazilian context, based on a survey conducted among family businesses, guiding the development of surveys in other fields facing the same challenges.

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