

**COMMUNICATION BUDGET DETERMINATION THROUGH THE LENS OF
THEORIES-IN-USE AND ESPOUSED THEORIES**

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1 INTRODUCTION

The determination of a company's communication budget is a complex decision involving the efficient distribution and allocation of limited financial resources within a landscape of numerous opportunities. This process is challenging due to the emergence and evolution of various media and communication alternatives. For instance, unlike the traditional annual budgeting model, where budget alterations occur at longer intervals, in the digital context, budget determination and allocation must be adjusted much more frequently to meet market changes (Zhao et al., 2019).

This dynamic scenario is further aggravated by the pressure for rapid and assertive results. Top management demands effective decisions and frequently shows low tolerance for errors. Executives face the challenge of making quick decisions (Farris, 2015) that can generate satisfactory returns to ensure company growth in highly competitive markets. The pressure for immediate results makes communication budget determination even more critical, as misguided decisions can lead to organizational failure (Palmatier; Crecelius, 2019).

It is important to highlight that, due to increasing competitiveness in the global marketplace, investments in marketing communication have grown steadily in recent years. According to a report by PQ Media, a U.S.-based market research firm, global communication spending reached 733 billion USD in 2023, representing a 2.6% increase compared to the previous year (Meio & Mensagem, 2024). In Brazil, the *Data Stories* report, published by the market research firm Kantar Ibope Media, showed that media buying expenditures totaled 80 billion BRL in 2023, an 8% increase over 2022, with further growth expected in 2024. In this context, the need to allocate communication budgets efficiently has become even more pressing, underscoring the relevance of adopting more rigorous and evidence-based approaches to budget determination.

Therefore, it becomes fundamental to understand how companies determine their communication budgets. Historically, executives have adopted two types of methods for this decision-making: Heuristic and Algorithmic. Heuristic methods are based on less elaborate processes, primarily relying on intuition, perceptions, and personal experiences (Palmatier; Crecelius, 2019). Algorithmic methods, conversely, rely on attribution models (Kumar et al., 2016). International studies indicate that the "more sophisticated" methods (i.e., Algorithmic methods) are underutilized and have not been adopted as rapidly as academic expectations suggested (West; Ford; Ferris, 2014). In other words, managers continue to rely on and employ Heuristic methods (Palmatier; Crecelius, 2019).

People make decisions based on subconscious or explicit mental maps, constituted by understandings of what can motivate a particular choice (i.e., Governing Variables or antecedents), and what can result from that choice (Argyris; Schön, 1992). Along these lines, researchers Chris Argyris and Donald Schön proposed the concepts of Theories-in-Use and Espoused Theories to comprehend the dynamics of human decision-making.

While Theories-in-Use refers to the mental maps that guide how people effectively act and make decisions in practice, Espoused Theories describes the mental maps that define how they idealize acting (Argyris; Schön, 1997). The literature points to the existence of a dissonance between these two concepts, reflecting a difference between individual's types of mental maps (Argyris; Schön, 1992).

The concepts of Theories-in-Use and Espoused Theories, as well as a possible dissonance between the two, influence marketing decisions because they confront observed real-world practices with established strategies (Van Der Borgh, 2022), challenging traditional practices and encouraging continuous review and improvement of the methods used. Although these concepts have been explored by various marketing academics, such as Zeithaml et al. (2020) and Van Der Borgh (2022), to the best of our knowledge no academic research have yet been identified that use the concepts of marketing managers' Theories-in-Use and Espoused Theories in Brazil to understand their decisions regarding methods for determining communication budgets.

Therefore, this research has two objectives: (1) to understand the main reasons for adoption and the challenges perceived by marketing managers regarding Heuristic and Algorithmic methods in determining communication budgets; and (2) to understand, based on the theoretical lens of Theories-in-Use and Espoused Theories, if there is a difference between the methods idealized by managers and those effectively used in communication budget determination. If so, what are the reasons that lead to a dissonance between these methods.

These objectives are reflected in the following research questions: (RQ1) *What are the main reasons for adoption and challenges associated with Heuristic and Algorithmic methods for communication budget determination?* (RQ2) *What are the reasons for the dissonance between the methods used and the methods idealized by marketing managers in communication budget determination in Brazil?*

To answer these questions, a qualitative, exploratory method was adopted, based on interviews with 20 executives involved in communication budget determination within their companies. The study shows that marketing managers perceive benefits and challenges associated with each type of budget determination method. While Heuristic methods are adopted due to their simplicity and ease of implementation, they are questioned for being less sophisticated and based on general rules. Algorithmic methods, on the other hand, are perceived as more robust and sophisticated but demand time, financial resources, and a large universe of people for testing. Regarding a possible dissonance, in line with the literature, it was found that managers in Brazil idealize the application of Algorithmic methods but adopt Heuristic methods. The study shows that this dissonance is mainly due to factors such as organizational culture, resistance to change, and reliance on established practices.

From a theoretical perspective, this study expands academic knowledge about the determinants of marketing managers' behavior in the communication budgeting process in Brazil. Over the years, the literature, notably the works of Bigné (1995), West and Prendergast (2009), and West, Ford, and Ferris (2014), has investigated the methods used in communication budget determination, as well as the reasons for their adoption, with an emphasis on European and North American contexts. However, there's a gap in these studies, which often overlook markets like Latin America. Furthermore, this study

identifies the reasons that lead executives to make pragmatic decisions in budget setting, diverging from what they consider ideal for their companies. To understand this phenomenon, the concepts of Theories-in-Use and Espoused Theories, developed by Argyris and Schön (1992), were used as theoretical lenses. From a practical standpoint, the research identifies factors that lead managers to opt for Heuristic or Algorithmic methods in communication budget determination, further identifying the inherent challenges of each method, and providing practical guidance to enhance decision-making processes in companies.

2 THEORITICAL BACKGROUND

2.1. Heuristic and Algorithmic Methods

The budget is a formal instrument used to define corporate plans, objectives, and goals within a specific period, being essential for the financial and strategic management of organizations by enabling efficient resource allocation and performance monitoring (Shim; Siegel; Shim, 2011). Among its components, the marketing budget stands out, detailing the costs and expenses aimed at the development, promotion, and commercialization of products and services. Within this scope, the communication budget plays a central role, encompassing investments in advertising, branding, public relations, promotions, and contact channels with the target audience.

In the past, executives made investment decisions in a less sophisticated, non-empirical manner, anchored in intuitions, perceptions, and personal experiences (Palmatier; Crecelius, 2019). During this period, also known as the Heuristic era, the most used methods were percentage of sales, percentage of profits, historical benchmarking, and comparison with competitors (Farris; West, 2007). With the ease of data collection, processing, and analysis, the Data Era emerged, where marketing executives began to employ more sophisticated methodologies based on attribution models (Kumar et al., 2016), including experiments, econometrics, regressions, and statistics (Palmatier; Crecelius, 2019), among others.

Nature of Methods

West, Ford, and Farris (2014) present some Heuristic methods adopted in communication budget determination, such as: (1) Arbitrary, based on managers' personal perception of how much should be invested in communication (Farris; West, 2007); (2) Affordable method reflects a method based on the financial resources available for communication investment. It is frequently criticized due to its lack of Algorithmic foundations and for not being linked to any strategic objectives (Farris; West, 2007); (3) Percentage of Sales is a very common method in companies. These methods are simpler to adopt and understand, being considered a "comfort zone" for executives. On the other hand, some authors argue that this method, by conditioning the budget to sales, leads to increased values when business is good and vice versa. They question: *shouldn't investment in marketing be increased during bad times instead of reduced?* (Farris; West, 2007); Lastly, in (4) Competitive Parity: the budget is based on the amount invested by direct competitors (Kolsarici; Vakratsas; Naik, 2020). Despite its simple adoption, it suffers from the fragility of information asymmetry, as well as differences in each company's objectives, maturity, timing, and brand strength, which can distort the comparison.

In the communication budgeting process, companies also use Algorithmic methods. Big Data has the capacity to offer more assertive resource determination opportunities between offline and online media (Cao; Tian; Blankson, 2022), a better understanding of consumer behavior, and their purchasing experience. West, Ford, and Farris (2014) highlight several types of Algorithmic methods: (1) Objective and Task is the most widely used Algorithmic method over time. Investment determination is based on a process where sales, profitability, or market share objectives are established. Subsequently, the marketing department designs tactical plans and the budget necessary to achieve these objectives (Farris; West, 2007); In (2) ROI (Return on Investment), the budget is based on calculating the expected return on communication investment (West; Ford; Farris, 2014); In type (3) Experiments, resources are allocated for conducting experiments and tests. Based on the results, the budget is increased or reduced. Although sophisticated, these methods are more complex, demand time and investment, making them unfeasible for many companies (Lewis; Rao, 2015); Finally, with type (4) Quantitative Models, the use of models involving econometrics, statistical regression models, among others, is observed. These are considered difficult to implement by marketing executives (Kolsarici; Vakratsas; Naik, 2020).

Pros and Cons of Methods

Heuristic methods reduce the number of alternatives, as well as the quantity and type of information needed for opportunity evaluation, thereby simplifying the decision-making process (Kahneman, 2011). Authors such as West, Ford, and Farris (2014) advocate for the application of Heuristic methods due to their simplicity and easy adaptability to various situations. Furthermore, they function perfectly in cases where executives possess strong intuition and knowledge about the problem. Kahneman (2011) states that heuristics can be of great value for decision-making in highly complex problems or when there is time pressure for definition. On the other hand, they face criticism for being less sophisticated, based on rules of thumb, and offering higher risks in their recommendations (Zuckerman; Chaiken, 1998).

Regarding Algorithmic methods, West, Ford, and Farris (2014) defend their use for several reasons: (1) with the evolution of data collection and analysis processes, it becomes possible to develop more sophisticated and precise models for budget determination; (2) they are better suited for entrepreneurs, startups, or companies that lack historical data, revenue, and consumer behavior records. However, similar to Heuristic methods, Algorithmic methods also receive criticism, such as: (1) not presenting total consistency in measuring the effectiveness of communication actions (Kolsarici; Vakratsas; Naik, 2020), and (2) requiring time, financial resources, a large universe of people, and test and control markets (Lewis; Rao, 2015).

2.2. Theories-in-Use and Espoused Theories

Definition

Chris Argyris and Donald Schön, prominent academics in the field of organizational behavior and learning, dedicated their work to studying the conscious and unconscious reasoning processes of individuals that condition their decision-making (Dick; Dalmau, 1999). In their investigations, they suggested that individuals develop mental maps that guide the planning and implementation of their actions. However, few

people are aware that the maps they use to act differ from the theories they explicitly express as ideal (Anderson, 1994).

Argyris and Schön (1992) themselves propose the existence of two theories of action: one consistent with what people verbalize they believe to be ideal (Espoused Theory) and another consistent with their actual actions (Theories-in-Use). Although Espoused Theories and Theories-in-Use may, at times, overlap (Van Der Borgh, 2022), these distinctions affect decision-making in both personal and organizational contexts.

They created an explanatory model for Theories-in-Use to help people make more informed choices about the actions they design and implement. This model comprises three key elements: (1) Governing Variables, which refer to the values, beliefs, and principles that guide individuals' behavior in a given context; (2) Action Strategies, which reflect the methods and strategies people use to achieve objectives and solve problems, yet still within the patterns established by accepted societal values; and (3) Consequences, meaning that every strategy generates consequences, whether intentional or deliberate (where the person consciously chooses their strategies expecting a certain result), or unintentional or spontaneous (based on habits, instincts, or past experiences).

These three key elements interact with each other. Governing Variables influences decision-making choices (Action Strategies), which in turn generate results (Consequences). It is important to note that results also influence future decision-making, values, and beliefs. Espoused Theories, on the other hand, pertain to the vision, beliefs, principles, and values that people believe guide their behaviors (Savaya; Gardner, 2012). While Espoused Theories represent what an individual claims to follow as they reflect the idealized, Theories-in-Use reflect how people genuinely behave (Argyris; Schön, 1992).

Dissonance

When an individual acts differently from what they verbalize or believe to be ideal, what is termed dissonance between Theories-in-Use and Espoused Theories occurs, generating the dilemma of incongruence (Argyris; Schön, 1992). This can be explained by several factors, including: (1) individuals encountering situations where their personal beliefs and values conflict with required practices. This dissonance can result in the adoption of behaviors that do not correspond to their convictions, leading to a disconnection between what they profess to believe and their actual actions; (2) Social pressures and cultural norms can lead individuals to conform to standards that may not align with their beliefs. To avoid conflict, they tend to suppress their genuine opinions and adopt behaviors that align with group expectations, resulting in a dissonance between their internal convictions and external actions.

In order to preserve a favorable self-image, individuals resort to (3) rationalizing behaviors that are inconsistent with their beliefs. This stance can culminate in the denial or minimization of incongruence, generating resistance to change and maintenance of the status quo; And finally, (4) individuals frequently use cognitive shortcuts that facilitate the decision-making process. However, this simplification can lead to the adoption of actions that are not in line with their beliefs and values.

2.3. Theories-in-Use and Espoused Theories in Communication Budgeting Methods

In the context of communication budget determination methods, we identify a duality between marketing managers' Theories-in-Use and Espoused Theories. After decades of study, academia presumed that Algorithmic methods, due to their more

scientific and rational nature, would be more widely adopted, thus replacing Heuristic methods (West; Ford; Farris, 2014). Furthermore, there was an idealization that the advent of Big Data would allow executives to create and implement diverse strategies (Palmatier; Crecelius, 2019), accelerating the adoption of Algorithmic methods, including in the communication budgeting process. Finally, despite the common belief that marketing professionals make purely subjective decisions based on intuition and personal experience, which might suggest a preference for Heuristics, research by West, Ford, and Farris (2014) indicated that several professionals declared a predilection for Algorithmic methods.

However, previous research observed that in practice, despite the growing availability of data for using more sophisticated methods, these encounter resistance in implementing budgetary recommendations and have not been adopted as rapidly as academia expected (West; Ford; Farris, 2014). Marketing executives still rely on Heuristic methods (Palmatier; Crecelius, 2019), due to their practicality, ability to provide quick solutions, low cost, and their history of use in companies (West; Ford; Farris, 2014). Thus, faced with urgent demands and limited resources, decision-making tends to become rapid and complex, not allowing for detailed analyses. In this context, marketing managers make decisions considering short deadlines and scarce resources, in contrast to the more sophisticated theories and models found in academic literature.

3 METHODOLOGY AND RESEARCH DESIGN

This research has two objectives: (1) to understand the main reasons for adoption and challenges perceived by marketing managers regarding Heuristic and Algorithmic methods for communication budget determination; and (2) to identify if there is dissonance between the methods effectively applied and those idealized by marketing management in budget determination, and if so, to understand the reasons for this dissonance. For this, the theoretical lens of Theories-in-Use and Espoused Theories, concepts formulated by Argyris and Schön (1992), is used. In this study, we adopt the methods that marketing managers claim to apply in practice as a proxy for Theories-in-Use [1]. Espoused Theories, on the other hand, are captured via managers' opinions and beliefs regarding the methods that would ideally be applied in marketing decisions, including communication budget decisions. A qualitative method of descriptive and exploratory nature was adopted, with primary data collected through in-depth semi-structured interviews with marketing managers in Brazil.

3.1. Participant Selection

The sample was non-probabilistic and purposive, as participants were deliberately chosen based on their lived experience in budgeting processes. Table 1 presents the profile of the twenty interviewees. No objection was placed on company size, segment, or revenue level. We sought respondents from companies of diverse segments, sizes, and years of professional experience to ensure sample heterogeneity.

The author conducted a multi-step participant selection process: (1) identification of existing personal contacts on LinkedIn; (2) expansion of the contact base through online searches for marketing executives who fit the profile of potential respondents; and (3) outreach to colleagues, professors, executives, and other professional acquaintances to request referrals of additional qualified individuals.

Table 1 – Interviewees' Profile

Interviewee	Position	Experience (yrs.)	Industry	Company Origin
1	Business Director	24	Fashion	National
2	Brand Manager	18	Apparel	Multinational
3	Marketing Director	27	Footwear	Multinational
4	Marketing Director	25	Tourism	Multinational
5	Marketing Manager	22	Financial	National
6	Marketing Director	27	Sporting Goods	Multinational
7	Marketing Director	14	Beverages	Multinational
8	Brand Manager	16	Electronics	Multinational
9	Marketing Director	25	Electronics	Multinational
10	Marketing Director	25	Construction	National
11	Marketing Director	30	Telecom	National
12	Marketing Manager	25	Financial	National
13	Marketing Director	16	Supplements	National
14	Marketing Director	25	Personal Care	National
15	Marketing Manager	15	Apparel	Multinational
16	Marketing Manager	16	Third Sector	National
17	VP of Operations	27	Ecommerce	National
18	Marketing Director	17	Food	National
19	Marketing Manager	10	Ecommerce	Multinational
20	Marketing Director	25	Telecom	National

Source: Prepared by the author

Regarding participant selection, professionals with a minimum of 10 years of experience in marketing were invited to obtain more relevant insights into the budgeting process. To ensure diversity in our sample, a questionnaire was previously administered to understand the nature of the methods adopted by participants in the communication budgeting process. Participants were chosen to achieve a balanced sample in terms of adopted methods: approximately half of the invited participants primarily used Heuristic methods for communication budget determination, while the other half utilized Algorithmic methods.

A strategy was established to stop interviews for material analysis after 20 respondents. As no new relevant themes were identified and repetition of ideas was noted, with sufficient empirical support already present to substantiate the findings, we considered thematic saturation to have been reached, i.e., further interviews ceased to yield new themes, novel interconnections, or significant refinements to the emerging exploratory framework (Green and Thorogood 2004).

3.3. Data Collection

Data were collected through in-depth semi-structured interviews conducted between July and September 2024 via video conferences using Zoom software. The interview guide, presented in Appendix I, was based on the literature review, contained open-ended questions, and was divided into four blocks: 1) Use of data and Algorithmic tools in marketing, 2) Budget determination methods used, 3) Use of Algorithmic methods in the budgeting process, and 4) Dissonance between idealization and practice of marketing managers regarding communication budgeting methods.

Before fieldwork, the interview guide underwent a pre-test with academics and marketing executives to verify its structure, fluidity, response time, and whether the questions met the research objectives. All interviews were transcribed *verbatim* with the support of Transkriptor software.

3.2.3. Data Analysis

Data analysis and coding followed the thematic analysis technique (Creswell, 2021), which is based on a sequence of steps to identify recurring themes or ideas within a dataset. This approach facilitates data organization and interpretation, allowing for the revelation of patterns consistent with research objectives and promoting an in-depth understanding of results in the marketing context (Bogdan; Biklen, 1994).

Interviews were open coded, identifying important comments and grouped into categories. Subsequently, we performed axial coding, identifying relationships between concepts and grouping them into higher-order themes. The entire process was facilitated by QSR NVivo software to aid in the organization, coding, and categorization of the data.

4 RESULTS AND DISCUSSION

4.1. Reasons for Adoption and Challenges for Adoption

In this section, we address Research Question 1: *What are the main reasons for adoption and challenges associated with Heuristic and Algorithmic methods for communication budget determination?* In Figure 1, we present the data structure resulting from the analysis.

Figure 1 - Data Structure - Reasons for Adoption and Challenges of Heuristic and Algorithmic Methods



Source: Prepared by the author

4.1. Reasons for Adoption and Challenges of Methods

4.1.1. Heuristic Methods

Reasons for Adopting Heuristic Methods

Brazilian executives identified several reasons for adopting Heuristic methods in defining communication budgets. These are presented below.

(1) Simple to Use Method: A significant portion of interviewees highlighted that Heuristic methods are simpler, objective, and practical. They stated that these methods require few resources for their elaboration and definition, allowing them to dedicate more time to planning and executing other daily activities. As some interviewees mentioned:

"Yes, undoubtedly, simpler. And it frees up more time for me to be analyzing what action plans are being proposed, what the results of those action plans are, comparing what worked in one place with another." - Participant #13

"Simpler, practical, and because it has already been used by the company." - Participant #17

(2) Budgetary Decision Security: Participants mentioned that the use of Heuristic methods provides transparency and predictability regarding the resources that can be allocated throughout the year. This characteristic generates peace of mind and security, allowing for comfort in operating within a clearly defined budget. This pursuit of security is reflected in the statements of some participants:

"This determination based on the standard percentage for a given industry, based on your revenue estimation, I find it safer." - Participant #13

"So, it's the security of the pre-fixed amount there, of knowing exactly how the cruise will go, the speed that cruise will go throughout the year." - Participant #15

(3) Easy Method Comprehension: Some executives mentioned the ease of understanding and comprehension as a crucial factor. This characteristic aligns with the clarity and transparency of the process, contributing to a more agile implementation and facilitating the engagement of those involved. As an illustration, here's a participant's statement:

"It's simple, easy to understand." - Participant #12

(4) Alignment with Top Management: The majority of interviewees mentioned that budget definition often experiences top-down interference, influenced by revenue expectation projections. This reason for use is reflected in the following quotes:

"Exactly, top management would establish how much there was. It will be so many millions. So the budget for the marketing department is X based on that percentage, based on revenue expectation." - Participant #11

"There's a global directive; this goes through global direction." - Participant #13

(5) Common Company Practice: A good portion of interviewees indicated that the choice and use of Heuristic methods are ingrained practices within organizations. As per the following quotes:

"It's a common company practice; you start from the reference. I observed that this was practiced not only in marketing but in other areas." - Participant #14

"The marketing budget was always based on the sales projection for that year, in the companies I worked for." - Participant #20

Challenges of Heuristic Methods

The analysis of the interviews reveals several challenges in applying these methods:

(1) **Reliance on Historical Data:** The use of predefined values, derived from past performance, disregards current contexts and market dynamics that can influence the effectiveness of investments. The participant below emphasizes their concern by stating:

"Allocating a budget based on historical data, based on a fixed percentage on past business revenue, I find it crazy." – Participant #9

(2) **Rigidity in Budget Management:** Another aspect is the inherent inflexibility in applying fixed percentages to budget definition. The absence of adjustment mechanisms prevents the company from capitalizing on emerging opportunities, compromising its performance in the face of new market demands. This limitation is expressed by an interviewee:

"When I go for the fixed percentage method, what I don't like is that it becomes extremely locked in." – Participant #15

(3) **Potential Loss of Competitive Advantage:** The rigidity imposed by Heuristic methods can result in the loss of strategic advantages relative to competitors. The lack of flexibility in reallocating investments reduces the company's ability to respond promptly to changes in the scenario, harming its competitiveness.

"Here, you have no room for maneuver. If an opportunity arises and you eventually can't seize it, then you look around and see your competitor doing it. This is obviously frustrating for a marketing leader." – Participant #15

4.1.2. Algorithmic Methods

Reasons for Adopting and Challenges for Algorithmic Methods

Regarding the reasons for adopting Algorithmic methods, executives highlighted the following aspects.

(1) **Alignment with Company Objectives:** Most respondents stated that Algorithmic methods, though more complex, offer richer and deeper results. They allow communication investments to align not only with short-term objectives but also with a broader strategic vision. These methods demand greater business acumen, providing a better understanding of the company's overall strategy. As mentioned below:

"So, I think this is a richer method, despite being complex and deeper. It allows marketing and communication investment to be more aligned with the company's short-term objectives." - Participant #15

"The start of everything is this strategic understanding that needs to be done. It's extremely valuable, not only from a management perspective but also for the knowledge of the business as a whole that you will gain. It brings deeper knowledge about the way the company operates." - Participant #16

(2) Budget Flexibility: A common criticism of Heuristic methods is their inflexibility once the budget is set. In this context, more than half of the participants highlighted that Algorithmic methods offer greater flexibility. They allow freedom for experimentation, adaptations, and seizing new opportunities that may arise throughout the period, enabling rapid adjustments in strategies. The idea of budget flexibility is present in the following statements:

"Today, having more flexibility gives more power and much more clarity in decision-making. But perhaps practice has shown me that for the moment we are in, this more flexible mindset of ROI measurement and campaigns, etc., has proven more efficient." - Participant #9

"I have more freedom to test, more flexibility to bring in new players; I can have more creative freedom on this front. I don't have to be stuck to a model, no, it's always, I need to sell so much. It's more flexible in day-to-day work." - Participant #12

(3) Predictability and Control: A high percentage of interviewees emphasized that Algorithmic methods provide visibility and clarity regarding planned actions. Planning becomes more robust and predictable, benefiting various levels of the company. These methods promote greater team involvement, deeper plan development, and effective budget control. The quotes below illustrate these benefits of Algorithmic methods:

"I find it practical because you start the year knowing what you're going to do, everything is already allocated, you can have predictability within your actions." - Participant #2

"And the team delves so deeply into everything that there are many benefits, besides having greater budget control." - Participant #16

(4) Top Management or Headquarters Guidance: Several respondents confirmed that the adoption of Algorithmic methods, especially, is generally driven by top management, regional offices, or headquarters. In this context, the finance department plays a crucial role, ensuring that methods align with business objectives. This reason for use is reflected in the following participant statements:

"CEO of the operation together with finance, aligning with the business objective, profitability, and results." - Participant #5

"When the conversation starts to grow with more robust methodology for investment fundraising, seeding rounds, investment funds already come with this thesis ready. Then, that's top-down." - Participant #12

(5) Common Company Practice: Participants stated that Algorithmic methods are frequently applied in organizations, encompassing various countries and functional areas. For these executives, there is no need or interest in replacing them, given the alignment with corporate practices and familiarity with these methods. As mentioned by two of the participants:

"It was a common practice of the group." - Participant #2

"So, I think it's largely being done this way." - Participant #17

(6) Team Involvement: Interviewees highlighted that Objective and Task promotes greater involvement of teams, suppliers, and partners in the budgeting process. This method facilitates deeper knowledge about the organization's strategy and functioning, enriching collaboration and effectiveness in marketing initiatives. The statements below illustrate this reason:

"It tends to involve more people in business growth so you can exercise that budget. It greatly stimulates the marketing chain and the company's commercial area as a whole." - Participant #11

"I think there's this indirect benefit too of deeper knowledge about the way the company operates." - Participant #16

Challenges of Algorithmic Methods

The interviews also revealed challenges in adopting Algorithmic methods, such as:

(1) Lack of Parameters and Guidelines: This hinders budgetary planning, creating uncertainties in decision-making and compromising efficiency in resource allocation.

"But it's exhausting because there wasn't a number. So that was annoying, because it was a waste of time. It was, in a way, rework." – Participant #4

"And then my desire was to say, if they give me the number, we'll define the budget." – Participant #4

(2) Excessive Rework: The absence of structured planning leads to constant revisions in the budgeting process, causing strain on teams. This continuous cycle compromises agility and efficiency in resource allocation, leading to frustration, wasted time, and difficulty in implementing defined strategies.

"Two, three days of meetings. The whole team, the agency, would get together. They'd budget. Then they'd do all that. They'd get there. 'This project is better off killed.'" – Participant #4

(3) Impact of Revisions and Cuts: Constant budget adjustments set planning back, compromising the execution of strategies and the organization's adaptability. The complexity of Algorithmic methods limits the flexibility needed to respond to market demands and changes, preventing the exploration of new opportunities.

"So, I already did it, but at the end of the day there were so many cuts, and you go back to baseline." – Participant #17

"The theory was cool, but in practice the company, even due to the moment it was experiencing, didn't back it." – Participant #17

(4) Method Complexity: Difficulty arises from the requirement of technical knowledge and the need for coordination among teams of different seniority levels. Its implementation demands specific skills, and a lack of alignment among team members can result in rework and inefficiency.

"It's very complex, depending on the seniority level of your team." – Participant #15

"So, I think that to break down the concept and manage it day-to-day, giving a sense of consistency to the team, it's more difficult." – Participant #15

4.2. Dissonance between Idealized and Used Methods

In this section, we address Research Question 2: *What are the reasons for the dissonance between the methods used and the methods idealized by marketing managers in communication budget determination in Brazil?* The results point to a dissonance in communication budget determination, which aligns with international literature. Thus, marketing executives in Brazil recognize, value, and idealize (i.e., Espoused Theories) the adoption of Algorithmic methods, and indeed use and find it necessary to use data in marketing decision-making. However, Heuristic methods still prevail in decisions regarding the budgeting process (i.e., Theories-in-Use), either in isolation or in combination with Algorithmic methods.

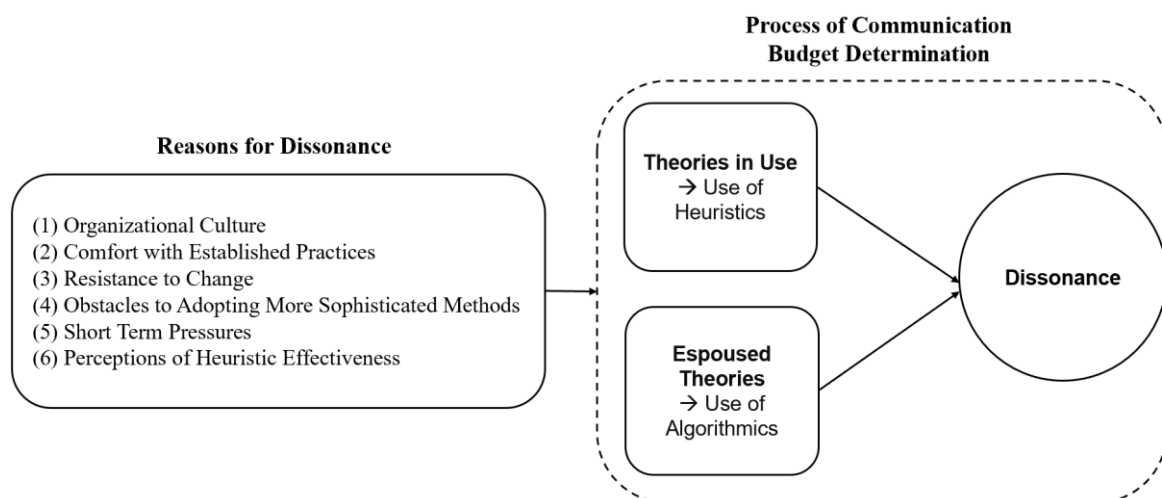
We found that most interviewees state the necessity of using data for marketing decisions. This reflects a data-centric culture, where the "data-driven" philosophy permeates various marketing activities. Executives highlighted how marketing decisions are frequently supported by concrete data, from product development to advertising campaign creation. In the interviews, participants emphasized the benefits of using data in marketing as generating insights, enabling adaptation and flexibility, and its importance in the decision-making process. In summary, it is observed that marketing executives declare a strong idealization that data-driven decisions not only increase the effectiveness of marketing initiatives but also promote an environment of transparency in the decision-making process.

On the other hand, despite proclaiming to recognize the value of Algorithmic methods and the use of data in marketing, budgeting practice is still anchored in Heuristic methods, either in isolation or in combination with Algorithmic methods. In international studies found in the bibliographic review, we also noted a mixed use between Heuristic and Algorithmic methods.

Reasons for Dissonance in Communication Budget Determination

Figure 2 summarizes the main reasons found for the dissonance between the methods of budget determination used versus idealized. These are discussed below.

Figure 2 – Dissonance in Communication Budget Determination in Brazil



Source: Prepared by the author

(1) Organizational Culture: In multinational and family businesses with strong hierarchies, decision-making tends to be centralized and risk averse. In these environments, rules and procedures seek to preserve the organizational status quo. As one participant reports:

"My experience was more in service companies, consumer, business-to-consumer. But there was a very strong interference in terms of P&L that ends up being top-down, dictating the total process of defining the total investment. You end up suffering an influence that is much more pragmatic, circumstantial, and financial, related to the P&L, based on revenue expectations." - Participant #1

In this context, there is a tendency to use Heuristic methods, which are considered safer, more predictable, and historically consolidated. Despite being "unsophisticated," these methods are common in top-down processes, strongly influenced by top management (Kolsarici; Vakratsas; Naik, 2020). As two participants exemplify:

"Well, my current scenario is a company practice, so we invest X percent in marketing." - Participant #4

"The company already had a global directive of what percentage of revenue should be allocated to marketing." - Participant #9

Conversely, in startups or companies with a more entrepreneurial culture, where decentralized decisions and less historical information are presumed to predominate, there may be a predilection for using Algorithmic methods. This preference in the context of more entrepreneurial companies aligns with findings from previous studies (West; Ford; Ferris, 2014). This interpretation is reflected in the following statements:

"So, I'm going to make a counterpoint now, bringing the model of a digital company where it's scalable. In this case, we're talking about recurring purchases, which have a lot of demand, being scalable in this way, the logic is completely different. In this case, the great driving force for revenue generation comes precisely from communication and marketing investments to generate audience and traffic." - Participant #12

"Because there are markets, like consumer goods, retail, these are things that are already stabilized. Now there are new lines of business that will require trial and error for this allocation, for the definition of this percentage." - Participant #13

Therefore, organizational culture shapes decision-making practices and influences the choice between methods. Previous studies, such as those by West, Ford, and Farris (2014), reinforce that the cultural context is a determining factor in corporate decisions, affecting both strategies and companies' adaptability. This research confirms this relationship: hierarchical organizations, like many multinationals and family businesses in Brazil, tend to adopt Heuristic methods. The literature already indicated this association, but the data suggest that, in Brazil, the influence of top management is even more pronounced. On the other hand, companies with an entrepreneurial profile prefer Algorithmic methods, in line with the literature, although they also face hierarchical influence in defining the adopted methods.

(2) Comfort with Established Practices: Familiarity with consolidated methods frequently leads companies to prefer Heuristic approaches, as they convey security and predictability. As marketing managers gain more experience, it is common for their

decisions to increasingly rely on intuition and personal perceptions, as the following accounts demonstrate:

"I felt very comfortable participating in this process; it was a top-down budget decision, and I always preferred to work with a predetermined number." - Participant #13

"Today, the standard we've been talking about here puts you in a comfort zone and in a box where you just have to organize the pieces inside the box, right?" - Participant #10

This preference does not imply an absence of analysis, but rather an interpretation of data influenced by prior experience. As West, Ford, and Farris (2014) point out, managers tend to interpret information based on accumulated experiences, extracting more contextualized and relevant insights. Both the literature and the data from this research reveal a strong association between comfort and the continuous use of Heuristic methods. According to Palmatier and Crecelius (2019), confidence in these methods stems precisely from the security and predictability they provide. Similarly, this research identified that familiarity with established practices reinforces their continuity in organizations, revealing resistance to adopting newer or innovative methods.

(3) Resistance to Change: Deep-rooted organizational cultures often value established practices, which generates resistance from executives to adopting more sophisticated methods. Even while recognizing the potential gains of Algorithmic methods, the familiarity with Heuristic approaches, combined with the pressure to follow what is already widely accepted, reinforces the maintenance of the status quo. This resistance hinders the transition to more effective practices, as illustrated by the account:

"To be honest, we end up operating a bit on autopilot, you know? As if it's given, so just follow. I think, you provoke me to reflect would be great, but being honest and considering daily reality, you just carry on." - Participant #10

The results of this research confirm the tendency observed by West, Ford, and Farris (2014): although data is available and managers recognize the benefits of Algorithmic methods, their adoption encounters organizational inertia. In the Brazilian context, this hesitation manifests even in the face of clear opportunities for improvement, perpetuating the use of Heuristic methods because they are more familiar and consolidated. Thus, resistance to change proves to be a determining factor in the persistence of traditional practices, limiting the evolution of management strategies even in the face of more efficient alternatives.

(4) Obstacles to Adopting More Sophisticated Methods: The implementation of Algorithmic methods is still perceived by many executives as a complex process that requires specific skills, adequate infrastructure, and significant cultural changes. Barriers such as the scarcity of Algorithmic competencies in teams, technological limitations, and lack of organizational support hinder their adoption. Consequently, Heuristic methods continue to be preferred for their simplicity and practical applicability, while Algorithmic tools are seen as difficult to integrate into daily corporate life. The following accounts illustrate these difficulties:

"No matter how much you want to use data, many companies can't provide you with that data. Lack of software, lack of team capacity, lack of the manager understanding how important data is for making their decisions." - Participant #7

"Personally speaking, I have a very Algorithmic, pragmatic, and rational profile, but I feel a lack of support. Sometimes I think it's a lack of culture which boils down to a lack of investment, which then boils down to a lack of tools in general." - Participant #10

These observations reveal that the challenges faced are not limited to infrastructure, such as the absence of appropriate tools or systems, but also involve cultural barriers, such as the low valuation of a data culture and reluctance to invest in team training. As Kolsarici et al. (2020) point out, the perception that Algorithmic methods demand time, resources, and organizational transformation contributes to their rejection. Similarly, Lewis and Rao (2015) highlight that, even with the recognition of their effectiveness, these methods are often seen as unfeasible given the practical limitations faced by companies.

Thus, both the data from this research and previous studies show that the transition to more sophisticated methods encounters not only perceived complexity but also financial, structural, and cultural limitations that reinforce the persistence of traditional approaches.

(5) Short Term Pressures: Corporate environments frequently demand agile decisions and immediate results, which favors the use of Heuristic methods, seen as simpler and quicker to apply (Farris, 2015). In contrast, Algorithmic methods demand more time for data collection, processing, and interpretation, making them less attractive when faced with tight deadlines. This scenario is illustrated by participants' statements:

"You have simplicity, the number came, that's what it is, embrace it and go, that's it." - Participant #3

Both the literature and the data from this research converge in pointing out that the need for quick responses leads managers to prioritize practical solutions. The preference for Heuristic methods intensifies in high-pressure contexts, as they offer immediate decisions without requiring significant resources or in-depth analysis. Thus, the urgency for results stands as a relevant factor in maintaining traditional approaches in organizations.

(6) Perceptions of Heuristic Effectiveness: Despite authors like Palmatier and Crecelius (2019) warning about the risks of over-reliance on Heuristics, many executives continue to value them based on successful past experiences. This belief tends to be reinforced when such methods have resulted in good performance in the past, creating a sense of security that hinders the adoption of more sophisticated approaches. As two of the participants reported:

"Yeah, I think we never tried to improve this method because it's a method that already happens, right, and we just follow it. I don't exactly have a value judgment; it's the method I know and it's the method we use." - Participant #1

This research corroborates the findings in the literature, indicating that Heuristic methods are perceived as effective due to their ability to simplify the decision-making process, reducing the need to evaluate multiple alternatives and interpret large volumes of information (Kahneman, 2011). Although more sophisticated tools are available, familiarity and perceived effectiveness maintain Heuristics as the standard in many

organizations. Thus, this consolidated perception significantly contributes to their continued prevalence as the primary approach in marketing decisions.

Comparative Analysis between Research Findings and Literature

When comparing the literature review with the results obtained in this research on the reasons for dissonance in communication budget definition, relevant convergences are observed, as well as particularities of the Brazilian context:

- (1) **Organizational Culture:** There is an alignment between literature and qualitative research regarding the use of Heuristic and Algorithmic methods. Farris (2015) indicates that companies with greater experience and data access tend to adopt Heuristic methods, while startups prefer Algorithmic ones (West; Ford; Farris, 2014). This research, however, highlights the strong influence of top management in Brazil, especially in multinationals and family businesses, reinforcing the preference for Heuristic methods.
- (2) **Comfort with Established Practices:** Both the literature and the research indicate that familiarity with Heuristic methods generates security and confidence, favoring their continuity. This preference reveals resistance to adopting more innovative approaches.
- (3) **Resistance to Change:** Even with available data and recognition of the benefits of Algorithmic methods, there is strong hesitation to replace consolidated practices (West; Ford; Farris, 2014). This perpetuates the use of Heuristics, which are more ingrained in organizational routines.
- (4) **Obstacles to Adopting Sophisticated Methods:** Both the literature, especially in the work of (Lewis; Rao, 2015), and this research indicate that the complexity of Algorithmic methods, coupled with the need for investments in infrastructure and training, makes their adoption unfeasible for many companies. Financial and organizational limitations are recurrent barriers.
- (5) **Short-Term Pressures:** Environments that demand quick decisions tend to favor Heuristics, as per Farris (2015). The research confirms that, in urgent contexts, managers opt for more direct methods that are less demanding in terms of time and resources.
- (6) **Perception of Heuristic Effectiveness:** Both sets of findings converge in recognizing that Heuristic methods simplify decisions by reducing alternatives and necessary information (Kahneman, 2011). This perception reinforces their prevalence in organizations, even in the face of more sophisticated alternatives.

The main difference between the literature and the Brazilian findings lies in organizational culture. While the literature addresses this factor broadly, focusing on types of organizations and openness to innovation, Brazilian research highlights the centralization of decision-making power, especially in family businesses and multinationals. In these companies, decisions are concentrated at the top management level, reflecting founder values or headquarters directives (Mintzberg, 2003).

In multinationals, alignment with global practices imposes restrictions on local autonomy (Mustafa, 2022). This structure favors Heuristic methods, which require less internal reorganization. Thus, the preference for Heuristics goes beyond simplicity: it reflects an adaptation to hierarchical rigidity and the fear of losing control in the decision-making process.

Therefore, organizational culture, marked by centralization, resistance to delegation, and the pursuit of immediate results, directly influences the choice of simpler methods. This reality underscores the need to contextualize the study of management practices in light of local specificities, broadening the understanding of the factors that shape the adoption of methods in communication budget definition.

5 CONCLUSION

5.1. Theoretical Contributions

One of the core responsibilities of marketing managers involves allocating budgets across products, customer segments, and markets. Given the limited availability of resources, proper allocation becomes increasingly critical (Palmatier & Crecelius, 2019). This need is even more pressing in a dynamic environment such as the digital landscape, where companies must frequently adjust their budgets to keep pace with market changes (Zhao et al., 2019). In addition, there is constant pressure for rapid and precise results, and due to the high level of market competition, companies invest heavily in communication, making decision-making even more challenging (Ferris, 2015).

This dissertation contributes to the academic discussion on the use of Heuristic and Algorithmic methods in budgeting contexts, revealing the coexistence and interaction of these approaches in both Brazilian and international settings. The findings show that, despite widespread recognition of the benefits of Algorithmic methods, current practice remains largely dominated by Heuristic approaches. This challenges the prevailing assumption that the adoption of Algorithmic techniques follows a linear and progressive trajectory (West, Ford, & Farris, 2014), and instead suggests that organizations operate along a spectrum in which both methods continue to play critical roles.

The study also addresses a gap in the literature by applying the theoretical lens of Theories-in-Use and Espoused Theories, developed by Argyris and Schön (1992), to understand the dissonance in the choice of communication budgeting methods, a perspective not previously explored in the marketing budget literature. By examining how managers' beliefs, idealizations, and actual behaviors are interrelated, this research advances our understanding of the factors shaping marketing decision-making in this domain. This empirical focus not only sheds light on the decision-making process itself but also enhances academic knowledge about executive behavior, offering relevant insights for future studies. The application of Theories-in-Use and Espoused Theories in the context of budget allocation provides a foundation for developing more realistic theoretical models that reflect the lived realities of marketing managers in emerging markets.

Finally, the findings highlight the critical role of organizational culture in the selection of budgeting methods. This aligns with prior research indicating that organizational culture influences all business and marketing activities, including the

budgeting process (West, Ford, & Farris, 2014). The study suggests that corporate culture, particularly in terms of decision-making centralization and risk tolerance directly affects the adoption of heuristic versus Algorithmic methods. This insight enriches the literature on organizational culture by positioning it as a key variable that should be considered in future research on marketing and managerial practices.

5.2. Practical Contributions

From a practical standpoint, this research offers actionable insights for marketing and communication leaders navigating the complexities of budget determination. It demonstrates that, despite the well-documented advantages and growing recognition of Algorithmic methods, actual budgeting practice remains largely dominated by Heuristic approaches. This dissonance presents a critical challenge, leading to sub-optimal resource allocation and missed strategic opportunities. To bridge this gap and unleash the full potential of communication investments, organizations must adopt a proactive and strategic stance, cultivating a deliberate and integrated balance between these two methodological frameworks.

This entails moving beyond mere theoretical appreciation by developing robust internal guidelines that promote the synergistic application of methods, combining the Algorithmic rigor of sophisticated tools with the essential agility and simplicity of Heuristics, echoing the successful practice of "multiple stakes in the ground" (Kolsarici, Vakratsas, and Naik, 2020). Such an integrated approach directly enhances organizational adaptability, enables more precise and justifiable resource allocation, and grounds strategic decisions in solid, reliable data, thereby sharpening competitive advantage.

Crucially, the successful transition towards more sophisticated and integrated budgeting demands unwavering, visible support from top management and company owners. Their strategic commitment is paramount for fostering a culture that not only values data-driven decisions but actively champions the necessary transformation. This commitment must translate into systematic investments in essential technological infrastructure (e.g., advanced analytics platforms, AI-powered tools), comprehensive and continuous team training (to build Algorithmic capabilities and overcome resistance to change), and the establishment of clear, persuasive communication that unequivocally highlights the tangible benefits and success stories of these advancements. By diligently addressing these organizational and behavioral challenges, businesses can transcend mere procedural improvements, truly maximizing the efficiency, effectiveness, and strategic impact of their communication investments, ultimately driving superior organizational performance and a stronger market position.

5.3. Limitations and Suggestions for Future Studies

Despite its contributions, this qualitative study is subject to limitations, which also open avenues for future research. Firstly, this research focused on the communication budget and marketing practitioners' perceptions. While enabling analysis within this specific area, it limits understanding of interactions with other crucial organizational functions like budgeting for product development, trade marketing, and sales. Future studies could explore these interdependencies for a more holistic view.

Furthermore, given the intentional sampling and small sample size inherent to qualitative research, the findings, while robust for the interviewed participants and based on thematic saturation, should be extrapolated to the broader population of communication and marketing practitioners with caution. They offer rich insights for specific cases and generate hypotheses, rather than providing statistically generalizable conclusions.

Building on these insights, future research could pursue several directions: (1) A next step involves employing research designs that allow for a more direct assessment of actual budgeting practices. This could include longitudinal studies involving observation of budgeting cycles, action research where researchers actively participate in or document budgeting processes, or detailed case studies that leverage internal organizational documents to triangulate self-reported data with tangible evidence of "theories-in-use." Such approaches would provide invaluable insights beyond managers' stated perceptions; (2) Replicate studies like West, Ford, and Farris (2014) to assess recent evolution in communication budget determination. Comparative studies across different countries could also enrich discussions on cultural and economic influences and (3) Conduct quantitative studies to test the prevalence of identified dissonance drivers (e.g., organizational culture, top management influence, short-term pressures) across larger, diverse company samples using survey methodologies.

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APPENDIX I – INTERVIEW GUIDE

Block 1: Use of Data and Algorithmic Tools in Marketing

- In the company where you work, how are data and Algorithmic tools used in marketing?
- What types of marketing decisions are driven by data and analytics?

Block 2: Methods Used for Budget Determination

- In your opinion, what are the best methods for determining communication budgets? Why?
- In the company where you work, which budget determination methods are used? Why do you use them?
- Have you ever considered using other methods? If so, why haven't you adopted them?

Block 3: Use of Algorithmic Methods in the Budgeting Process

- What is your opinion on more sophisticated methods, such as Algorithmic approaches?
- What are the reasons for using (or not using) these Algorithmic methods in your company?

Block 4: Dissonance Between Marketing Managers' Ideal and Actual Budgeting Practices

- Why, in practice, do you not use methods you believe would be better for the company?
- If you had full autonomy to choose the method, which one would you use?

Use of Generative AI in This Research

This study employed generative artificial intelligence (AI) tools during specific stages of the research process. ChatGPT was used to assist in the translation of excerpts from Portuguese to English, and refinement of academic language. The AI was not used to generate original content or analyze empirical data. The authors retained full responsibility for all interpretations, arguments, and conclusions presented in the paper.