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PREFACE

It is our great pleasure to present the *Proceedings of the 22nd International May Conference on Strategic Management*, a collection of contributions that reflect the dedication, creativity, and scholarly excellence of our academic and professional community.

We would like to express our sincere gratitude to all authors who have contributed their time, knowledge, and enthusiasm to this conference. This year, we are especially proud to highlight that the proceedings include contributions from authors representing more than 30 countries, underscoring the international character and growing impact of the conference. The diversity of topics and perspectives presented here highlights the importance of collaboration and continuous dialogue in addressing contemporary challenges.

We extend our deepest appreciation to our main sponsor, the Ministry of Science, Technological Development and Innovation, for its invaluable support and commitment to advancing research and innovation. We are also grateful to our gold sponsors, Zijin Mining and Zijin Copper, whose generous contributions have significantly supported the successful organization of this conference. In addition, we would like to thank our exhibition partner, MDPI, for their collaboration and engagement in promoting academic exchange.

We also extend our appreciation to the reviewers and members of the organizing committee, whose dedication and careful work ensured the quality and success of the conference. Their efforts have been essential in maintaining high academic standards and in bringing this publication to fruition.

Finally, we thank all attendees for their engagement and for fostering a stimulating and supportive environment. We hope that these Proceedings will serve as a valuable resource and inspiration for future research, collaboration, and innovation.

Thank you!!

Editors

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**ARTIFICIAL INTELLIGENCE ENABLED DECISION MAKING IN CONSTRUCTION
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APPLICATION OF CONTENT ANALYSIS AND THEMATIC ANALYSIS IN RESEARCH IN THE FIELD OF BUSINESS AND MANAGEMENT

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Abstract: Qualitative methods play a significant role in management and business research, particularly in the study of complex organisational and social phenomena. This paper aims to present and compare content analysis and thematic analysis as two important techniques of qualitative data analysis. The paper is based on a review of relevant scientific literature. The results indicate that content analysis is suitable for the systematic processing and categorisation of textual data, while thematic analysis enables deeper interpretation of meaning and experiences. It can be concluded that these methods differ in research approach, but their selection depends on the research objectives and the nature of the data.

Keywords: Qualitative analysis, Content analysis, Thematic analysis, Management, Business

1. INTRODUCTION

Contemporary research in management and business increasingly encounters complex and multidimensional phenomena, such as organisational culture, leadership, employee and consumer behaviour, and strategic decision-making processes. Such phenomena often cannot be fully explained by quantitative methods alone, leading to the growing use of qualitative research approaches.

Qualitative methods provide a deeper understanding of the meanings, experiences, and perceptions of actors within organisational and business contexts. Among the most commonly used qualitative data analysis techniques, content analysis and thematic analysis are prominent, enabling the systematic identification of patterns and the interpretation of textual, verbal, and visual data.

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The aim of this paper is to present the basic characteristics of content analysis and thematic analysis, highlight their similarities and differences, and explore their potential applications in management and business. The paper is based on an analysis of relevant domestic and international literature, with particular attention to methodological aspects and practical implications of these approaches.

2. QUALITATIVE METHODS AND POSSIBILITIES OF APPLICATION IN MANAGEMENT

Qualitative data analysis involves classifying and interpreting data to explain explicit and implicit dimensions, structures of meaning, and representations within the data. This analysis is used to describe phenomena, explain the causes of differences between individuals or groups, and develop theory based on the data. For these purposes, techniques such as content analysis and thematic analysis are commonly used, while other methods such as conversation analysis, narrative analysis, discursive analysis, or constant comparative analysis are applied less frequently (Özden, 2024).

Qualitative research methods hold an important place in contemporary research in business and management, particularly when the aim is to gain a deeper understanding of complex social, organisational, and market phenomena. Unlike quantitative methods, which focus on measurement and statistical processing of data, qualitative methods enable researchers to analyse the meanings, attitudes, perceptions, and experiences of actors in a real business context (Mayring, 2019; Taherdoost, 2016).

In management research, the qualitative approach is particularly used when research questions focus on understanding decision-making processes, consumer behaviour, leadership styles, organisational culture, innovation, and knowledge management. These phenomena are often complex, context-dependent, and difficult to measure with numerical indicators, making qualitative methods an appropriate methodological framework (White & Marsh, 2006; Miązek & Światowiec-Szczepańska, 2018).

Qualitative methods are based on the analysis of textual, visual, or verbal data, such as interviews, focus groups, documents, reports, marketing materials, and digital content. According to Mayring (2019), the key characteristic of qualitative methods is the systematic and transparent analytical procedure, which ensures the scientific validity of the results obtained. Taherdoost (2016) notes that qualitative methods allow flexibility in research design, as research questions and analytical categories can be adjusted during the research process. This feature is especially important in management, where business conditions change rapidly and new challenges and opportunities require adaptive research approaches.

In management, qualitative methods are used to research leadership, strategic management, employee and consumer behaviour, and to analyse innovation and development processes. Insch et al. (1997) emphasise that qualitative analysis is particularly valuable in leadership research, as it enables the identification of behavioural patterns, values, and attitudes of leaders that cannot be easily quantified.

In marketing and consumer research, qualitative data analysis aids in understanding purchase motives, brand perceptions, and consumers' emotional reactions. White and Marsh (2006) note that qualitative methods, especially content analysis, are flexible methodological tools that can be adapted to various research objectives in marketing and management.

The use of qualitative methods in business covers a wide range of areas, including the development and evaluation of business strategies, analysis of market trends and consumer behaviour, research into organisational culture and internal communication, as well as knowledge and innovation management (White & Marsh, 2006; Miązek & Światowicz-Szczepańska, 2018).

In tourism and development research, Vitouladiti highlights the importance of content analysis for identifying development strategies and marketing messages. Similarly, da Silva emphasises the use of qualitative methods in information and knowledge management research, where the analysis of textual sources enhances understanding of innovation processes within organisations (Vitouladiti, 2014; da Silva, 2022).

Qualitative methods, due to their in-depth and interpretative nature, enable managers and researchers to gain a holistic understanding of business phenomena, supporting better strategic decision-making (Mayring, 2019).

3. CONTENT ANALYSIS AND THEMATIC ANALYSIS

Qualitative data analysis in management and business research includes two key approaches: content analysis and thematic analysis. Both approaches enable researchers to identify patterns of meaning in textual, visual, or verbal data, but differ in methodological approach and degree of interpretation (Flick, 2014; Grbich, 2013).

Content analysis has a long history, with its first documented use in 1893 in the analysis of Shakespeare's texts (Sumpter, 2001). The modern development of content analysis in communication and media studies introduced a rule-based, systematic approach to data processing, which was later adopted in management research (Özden, 2024; Elo & Kyngäs, 2008; Hsieh & Shannon, 2005).

Content analysis originated in communication and media studies but has become widely applicable in management due to its systematic and rule-based approach to data analysis (Özden, 2024; Elo & Kyngäs, 2008). This method combines numerical and thematic techniques, enabling the analysis of both manifest (clearly expressed) and latent (implicit) content (Flick, 2014).

Hsieh and Shannon (2005) identify three types of qualitative content analysis: conventional, directed, and summative. Conventional analysis uses an inductive approach, forming categories directly from the data without pre-defined theoretical frameworks. Directed analysis is deductive and theory-driven, with codes defined before and during analysis based on existing literature or theory. Summative analysis focuses on quantifying concepts but also includes latent analysis to interpret meaning. The differences in these approaches, the timing of code definition, and the source of codes are summarised in Table 1.

Table 1. Summary of three content analysis approaches (Hsieh & Shannon, 2005)

Content analysis type	The research begins with	Time to define codes or keywords	Source codes or keywords
Conventional content analysis	Observation	Codes are defined during data analysis	Codes are derived from the data itself
Directed content analysis	Theory	Codes are defined before and during data analysis	Codes are derived from theory or relevant research
Summative content analysis	Keywords	Keywords are identified before and during data analysis	Keywords are derived from the researcher's interest or literature review

Mayring (2015) identified eight key techniques of qualitative content analysis:

1. Summarising – condensing key information.
2. Inductive category formation – creating categories directly from the data.
3. Narrow context analysis – focusing on specific parts of the data.
4. Broad context analysis – examining the data in a wider context.
5. Formal structuring – organising data according to formal criteria.
6. Content structuring – grouping data by topics or categories.
7. Type-building content analysis – developing types or models from the data.
8. Scaling structuring – ranking and organising information by importance or intensity.

Content analysis is used for the systematic coding and categorisation of data, the identification of communication patterns and trends, and the interpretation of complex and significant phenomena in organisations and business (Elo & Kyngäs, 2008; Özden, 2024; Grbich, 2013).

The data analysis process in content analysis is typically divided into three phases (Elo & Kyngäs, 2008; Hsieh & Shannon, 2005):

1. Preparation

- Determining the unit of analysis: words, sentences, phrases, interviews, documents, etc.
- Gaining a comprehensive understanding of the data: multiple readings of transcripts, identification of latent and manifest content.

2. Organisation

- Open coding and adding data labels.
- Formation of categories: grouping codes by common characteristics.
- Abstraction: integrating categories into a broader interpretation and connecting latent and manifest meaning.

3. Reporting

- Detailed explanation of the analysis conducted: coding, transcription, data protection, participant anonymity.
- Visual representations and tables: concept maps, models, and examples from the data.

Thematic analysis is a flexible and accessible method, suitable for identifying patterns of meaning within data without strict epistemological frameworks (Özden, 2024; Braun & Clarke, 2006). Unlike content analysis, which may involve quantification and formal structuring, thematic analysis enables researchers to integrate latent and manifest aspects of data and provide an in-depth interpretation of phenomena (Flick, 2014).

Braun and Clarke (2006) define six stages of thematic analysis:

1. **Familiarisation with the data** – detailed reading and copying of data, recording verbal and non-verbal indicators.
2. **Generating initial codes** – systematic labelling of significant data segments, creating descriptive and interpretive codes.
3. **Searching for themes** – grouping similar codes and identifying potential themes.
4. **Reviewing themes** – assessing the coherence and consistency of the themes, checking whether they adequately represent the data.
5. **Defining and naming themes** – giving precise and interpretatively significant names to themes.
6. **Writing the report** – presenting the results of the analysis through a narrative, tables, maps or models, with quotes and examples from the data.

3.1. Similarities and differences between content analysis and thematic analysis

Content analysis and thematic analysis are two key methods of qualitative data analysis that share several features, but also have significant differences in approach, application, and degree of interpretation.

Similarities:

- Pattern identification – both methods enable researchers to identify patterns of meaning in textual, visual, or verbal data (Özden, 2024; Braun & Clarke, 2006).
- Focus on qualitative data – used to analyse phenomena that are not easily measured quantitatively, such as attitudes, experiences, perceptions, and behaviours (Flick, 2014; Grbich, 2013).
- Combination of latent and manifest content – both methods allow analysis of clearly expressed (manifest) and implicit (latent) meanings in the data (Elo & Kyngäs, 2008; Saldaña & Omasta, 2021).
- Iterative process – analysis occurs through multiple stages and may require revisiting the data to refine codes and themes (Braun & Clarke, 2006; Özden, 2024).

Below is a comparison between thematic analysis and content analysis, focusing on their key features, methodological approaches, and application in qualitative research. Table 2 provides insight into the differences between these two methods, as well as their specific characteristics in data analysis.

Table 2. Comparison of thematic analysis and content analysis (Ahmed et al., 2025)

Property / Method	Thematic analysis	Content analysis
Main goal	Identification and interpretation of patterns / themes in data	Quantification and categorization of text content
Philosophical basis	Theoretically flexible (realist or constructivist)	Positivist or realist
Focus of analysis	Meaning, context and interpretation	Frequency and categorization of manifest content
Sample size	Flexible	Great
The role of the researcher	Active and reflective	Objective encoder
Theory development	Not central	Not central
Use of codes	Codes evolve into themes	Codes remain mostly descriptive
Flexibility of application	High	High, often combined with quantitative methods
Depth of interpretation	Medium to high	Low to medium
Tools	Manual or software (NVivo, ATLAS.ti, MAXQDA)	Code tables, Excel, NVivo

The table shows that content analysis emphasises systematicity, categorisation, and quantification of data, while thematic analysis offers a more flexible, interpretive approach, providing greater depth in understanding latent meanings. Both methods are applicable in management and business research, but the choice depends on the research objective and the type of data being analysed.

3.2. Application of content analysis in management and business

Content analysis is particularly valuable in management research and business environments, as it allows for the systematic processing of large volumes of textual data and the identification of patterns that might otherwise remain undetected. This method facilitates the identification and quantification of key information from various sources, such as company

reports, internal communications, documentation, marketing materials, media content, or user feedback (Elo & Kyngäs, 2008; Özden, 2024).

In management, content analysis is used for:

- Monitoring and evaluating internal processes – analysis of documents, procedures, and reports can help identify problems and suggest improvements.
- Analysing communication and information – identifying topics and key messages in the company's internal and external communications.
- Understanding market trends and consumer attitudes – by analysing comments, reviews, surveys, and social networks, dominant patterns of opinion and preferences can be observed.
- Systematising and categorising information – by using codes and categories according to Mayring's approach (2015), it is possible to structure data by topic, context, or importance, which facilitates strategic decision-making.

Content analysis can be inductive (conventional), where categories are formed directly from the data, or deductive (directed), where codes are developed according to existing theories and research. The summative approach allows additional quantification of key terms, along with interpretation of latent meaning, which is particularly useful for researching business communication and culture (Holsti, 1969; Hsieh & Shannon, 2005).

The application of content analysis in business is therefore twofold: it assists in the descriptive review of data (identification of patterns and frequency of concepts) and in the interpretive analysis of latent meaning, enabling managers to better understand internal processes, employee attitudes, and market needs (Saldaña & Omasta, 2021; Elo & Kyngäs, 2008).

3.3. Application of thematic analysis in management and business

Thematic analysis is a flexible and interpretive method that enables researchers to identify and analyse patterns of meaning within qualitative data. In management and business contexts, thematic analysis is often used to understand the attitudes, experiences, and perceptions of employees, leaders, and consumers, as well as to analyse organisational culture and communication (Braun & Clarke, 2006; Özden, 2024).

Application of thematic analysis in business includes:

- Understanding the views and experiences of employees – by analysing interviews, focus groups or surveys, key themes reflecting employee satisfaction, motivation, challenges, and needs for training or support can be identified.
- Analysis of leadership and organisational dynamics – identifying leaders' behaviours and communication patterns, as well as their impact on teams and organisational performance.
- Consumer and market research – analysing reviews, feedback or online comments to uncover dominant themes and customer expectations.
- Strategy and decision-making – thematic analysis helps managers identify latent patterns and critical themes, enabling strategic decisions based on a deeper understanding of the data.

The thematic analysis process comprises six stages according to Braun and Clarke (2006): familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing a report. This approach allows researchers to integrate latent meanings, link similar codes into coherent themes, and obtain a detailed interpretation of phenomena (Flick, 2014).

Unlike content analysis, thematic analysis does not require quantification but focuses on the contextual and interpretive depth of the data. It is particularly useful in management research when studying complex phenomena such as organisational culture, leadership, or consumer attitudes, as it allows for in-depth and reflective interpretation of latent patterns (Saldaña & Omasta, 2021; Nowell et al., 2017).

4. CONCLUDING REMARKS

The aim of this paper was to present and compare two significant approaches to qualitative data analysis – content analysis and thematic analysis – with particular reference to their application in management and business research. Through a review of the relevant literature, the theoretical foundations, methodological characteristics, and the similarities and differences between these two approaches were highlighted.

Content analysis has proved to be a systematic and structured method suitable for processing large volumes of textual data, especially when the goal is to identify frequencies, patterns, and categories in documents, reports, and communication materials. Its advantage lies in the possibility of combining qualitative and quantitative elements, as well as in the application of both inductive and deductive research approaches.

In contrast, thematic analysis is a flexible and interpretatively rich method, enabling a deeper understanding of the meaning, experiences, and perceptions of actors in the organisational and business context. Its application is particularly significant in research addressing employee attitudes, leadership, organisational culture, and consumer behaviour, where latent patterns of meaning play a key role.

Although these two methods are often used interchangeably or in conjunction with each other, research has shown that there are clear differences between them in terms of analytical focus, degree of interpretation, and the role of the researcher. The choice between content analysis and thematic analysis depends on the research objectives, type of data, and theoretical framework, but in practice they can be complementary.

Both methods are valuable tools in modern management and business research, as they enable a deeper understanding of complex business phenomena and support informed, strategically based decision-making. Future research may further explore the combined application of these methods within mixed research designs.

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