VIRTUAL ECONOMICS

2022 Volume 5 Number 4

ISSN 2657-4047 *(online)*

COMPARING IDIOGRAPHIC AND NOMOTHETIC APPROACHES IN MANAGEMENT SCIENCES RESEARCH

Henryk Dzwigol

Abstract. The article aims at providing guidance on choosing the appropriate research approach for different research contexts by comparing the importance of using appropriate methods and techniques in both idiographic and nomothetic approaches based on the results of international research. To achieve the intended goal of the article and answer the research questions, the results of quantitative research (a survey) were used. There was questioned an international group of experts consisting of scholars in the field of management sciences. The obtained research outcomes provide a more thorough understanding of current research trends. Additionally, they indicate the significance of various methods and techniques in the research process in management studies and highlight the current convergence of idiographic and nomothetic approaches in favor of combining research procedures, methods, and techniques. The contribution to the theory of management sciences focuses mainly on presenting recommendations regarding the selection of appropriate approaches to the research process emphasizing the role of methodological triangulation and indicating significant methods that increase the reliability and quality of the research.

Keywords: research methods, research process, management science, idiographic and nomothetic approaches

JEL Classification: B41, C18, M20

Author:

Henryk Dzwigol

Faculty of Applied Sciences, WSB University in Dabrowa Gornicza, Poland; Sumy State University, Sumy, Ukraine; Silesian University of Technology, Zabrze, Poland

E-mail: henryk.dzwigol@polsl.pl

https://orcid.org/0000-0002-2005-0078

Citation: Henryk, D. (2022). Comparing Idiographic and Nomothetic Approaches in Management Sciences Research. *Virtual Economics, 5*(3), 27-49. https://doi.org/10.34021/ve.2022.05.04(2)

Received: April 15, 2022. Revised: September 12, 2022. Accepted: November 5, 2022.

1. Introduction

The field of management sciences is concerned with understanding and explaining the decision-making and behavior of organizations (Wróblewski & Dacko-Pikiewicz, 2018), managers (Trzeciak et al., 2022), and employees in different situations (Hinojosa et al., 2017; Schad et al. 2016). To achieve this, researchers must adopt an appropriate research approach that is tailored to their research goals and questions (Dźwigoł, 2020; Dzwigol et al., 2020a). The two main approaches in management sciences research are the idiographic and nomothetic approaches (DeFreese & Nissley, 2020; Zhang et al., 2022).

The idiographic approach is focused on the distinctiveness and uniqueness of each case or phenomenon studied (De Luca Picione, 2015; Miśkiewicz, 2018). Rather than seeking to draw general conclusions that can be applied to a larger population, this approach aims at gaining a deep understanding of the specific context and conditions of each case. On the contrary, the nomothetic approach aims at identifying general principles, laws, and theories that can explain behavior across a larger population or set of cases (Ashworth et al. 2019; Szczepańska-Woszczyna & Gatnar, 2022). It seeks to uncover patterns and relationships that are consistent across multiple cases or situations (Patel, 2017; Dźwigoł & Dźwigoł-Barosz, 2018).

In the field of management sciences, the idiographic approach involves in-depth study of individual cases or organizations, often using qualitative research methods such as case studies (Kharazishvili et al., 2020; Abazov, 2021; Miśkiewicz, 2021a; Kharazishvili et al., 2021), interviews (Kwilinski et al., 2020a; Kuzior et al., 2021a; Kuzior et al., 2021b), or observations (Shareia, 2016; Tkachenko et al. 2019; Kwilinski et al., 2022a). This approach enables researchers to delve into complex issues, to uncover the unique factors that influence each organization's behavior and decision-making (Lehnert et al., 2016; Saługa et al., 2020), and to identify patterns and themes that might be missed by more generalized research methods. The idiographic approach is particularly useful in management sciences research when the goal is to obtain a comprehensive understanding of a specific issue (Ackermann & Alexander, 2016; Dzwigol, 2021), to generate rich and detailed data that can inform theory-building, or to examine complex and dynamic phenomena that are not easily quantifiable (Welch et al., 2020; Dzwigol, 2021). However, the idiographic approach can be time-consuming and may lack generalizability, so it is important to carefully consider the research question and objectives before choosing this approach (Rajiani et al., 2018; Alsharari & Al-Shboul, 2019; Miśkiewicz, 2019). Oppositely, the nomothetic approach typically involves quantitative research methods, such as surveys or experiments, that aim at establishing cause-and-effect relationships and testing hypotheses (Drożdż & Mróz-Malik, 2017; Günbayi & Sorm, 2018; Miśkiewicz et al., 2021). The purpose is to identify and test general theories or models that can explain behavior in a particular context. The nomothetic approach is particularly useful in management sciences research when the purpose is to test hypotheses (Dźwigoł & Dźwigoł-Barosz, 2018; Dźwigoł-Barosz & Dźwigoł, 2021), to establish causal relationships, or to generate findings that can be generalized to a larger population or set of cases (Parker & Northcott, 2016; Drożdż et al., 2021; Lyulyov et al., 2021a; Lyulyov et al., 2021b). It provides a rigorous and systematic approach to research that can lead to more robust and generalizable

findings. However, the nomothetic approach may overlook important contextual factors that can influence behavior and decision-making, and may not provide a complete understanding of complex or dynamic phenomena (Klimstra & Denissen, 2017; Vaníčková et al., 2020).

The present article focuses on the importance of selecting the appropriate research approach, either idiographic or nomothetic, and the methods and techniques employed in the research process in management sciences. Specifically, the article seeks to answer the research questions on which methods and techniques are essential in management sciences research and which research method should be used. The article aims at providing guidance on choosing the appropriate research approach for different research contexts by comparing the importance of using appropriate methods and techniques in both idiographic and nomothetic approaches based on the results of international research. Furthermore, the contribution made to the literature emphasizes the importance of research triangulation, especially in management sciences.

This study contributes to the ongoing discussion on research approaches in management sciences and serves as a valuable resource for researchers and practitioners interested in conducting high-quality research in this field.

2. Literature review

Functionalism utilizing quantitative research or classical grounded theory techniques was a manifestation of the so-called nomothetic approach, which focused on seeking regularities, patterns (Kostyrko et al., 2021; Polcyn et al., 2022; Miśkiewicz et al., 2022), and relationships (Hussain et al., 2021), and striving to formulate laws, including by verifying hypotheses using statistical techniques (Murphy et al., 2017; Chen et al., 2021; Cyfert et al., 2021). Researchers aimed at further expanding their knowledge by verifying, confirming, or questioning additional social regularities. Typical research procedures within idiographic approach include experimentation, surveying, and correlation, while appropriate methods include interviews, surveys, observations, experiments, and tests.

An alternative to nomothetics is the so-called idiographic approach, in which a researcher is interested in individual cases, events, or facts, aiming at better understanding social mechanisms (Klimstra & Denissen, 2017; Coban et al., 2022a; Coban et al., 2022b). This conceptualization allows for a comprehension of human actions in their natural context, supports a researcher's reflection and identification of relationships that nomothetic proponents verifying hypotheses on large samples do not take into account (Patel, 2017; Dźwigoł & Dźwigoł-Barosz, 2018). Idiography is useful for exploring new, previously unknown issues and problems (so-called exploration) (Van Langenhove, et al., 2016; Drozdz et al., 2020b). In the case of this approach, an appropriate research procedure is a case study, while methods used in this area may include documentation analysis, interviews, observations, or projective tests (Turner et al., 2020; Kwilinski et al., 2021a; Kuzior & Kwilinski, 2022).

Nomothetic research focuses on a limited number of pre-selected variables consciously giving up a consideration of many additional factors in the study, while the idiographic approach allows for the analysis of a very large number of such factors, but only for a single case or a small number of studied organizations (Lyon et al., 2017; Kwilinski, 2018; Kwilinski, 2019). According to Windelband & Rickert (1999), the distinction of the idiographic approach resulted from a focus on seeking characteristic features that distinguish given phenomena from others.

According to the general classification of sciences, it is accepted that economic sciences serve a utilitarian or theoretical-normative function (Truc, 2018). As management sciences are a part of economic sciences they are also subject to this role (Schad et al., 2016). Nomothetics occurs when a general law is determined based on the analysis of a single case. Idiographic methodology is used to study and understand the essence and characteristics of a specific event (Dźwigoł, 2020; Hayes et al., 2019).

The problem of choosing tools to understand and explain a phenomenon, especially in social sciences, depends on the science paradigm (Khaldi, 2017; Dementyev et al., 2021; Kwilinski et al., 2022b), even though quantitative research is generally considered "better" and provides more reliable knowledge than qualitative research (Yardley & Bishop, 2017). However, in many cases, the nature of the research problem necessitates qualitative research.

Quantitative research involves empirical research that measures specific variables in a quantitative way using measurement instruments (Antwi & Hamza, 2015; Kwilinski et al., 2020b; Banasik et al., 2022; Miskiewicz, 2022). They are used when a research problem and conclusions can be described using quantitative measures. Quantitative research also includes survey research, which verifies hypotheses by analyzing the frequency of responses (Runfola et al., 2017). Quantitative laws are developed using mathematical formulas (successor) (Dźwigoł, &Dźwigoł-Barosz, 2018). The preceding operation (predecessor) in this law is to determine the conditions under which a particular relationship occurs. Qualitative laws are defined in the language of a particular science and aim at identifying the properties possessed by a particular class of objects (Brinkmann, 2017; Chygryn, 2018). They have a less precise description of the predecessor compared to quantitative laws. It should be noted that the context of quantitative and qualitative laws does not necessarily have to be related to quantitative and qualitative research (Hammersley, 2017; Borgstede & Scholz, 2021; Nawawi et al., 2022).

The field of management sciences consists of various disciplines, sub-disciplines, and scientific specialties that draw upon other fields of science, and therefore do not have their own methodology and cognitive tools (Schad et al., 2016; Bogachov et al., 2020). As a result, researchers studying management problems are required to put in a great deal of effort to determine the appropriate research method for an analyzed phenomenon (Apuke, 2017; Basias & Pollalis, 2018). Additionally, they should establish a research program that encompasses not only the defined area of study but also a specified research problem and its

objectives. Often, a choice of research tools may depend on research purposes (Dźwigoł, 2019; Dźwigol et al., 2019).

Currently, to increase the credibility of research and the probability of finding a solution, the principles of triangulation are often utilized (Abdalla et al., 2018; Dzwigol, 2020). This involves using multiple different procedures to seek answers to research questions. However, this approach carries the risk of researchers employing methods that they do not fully understand or are unfamiliar with.

Building scientific knowledge requires discipline and a scientific approach. Therefore, in order to properly select a research method for the context of their study, researchers must be familiar with the differences between specific scientific methods or approaches in social science methodology (Patten, 2017; Shafait et al., 2021; Arefieva et al., 2021).

Economists as scientists tend to overuse tools employed in the exact sciences and marginalize tools of other social sciences, apply complex theories to simple issues, favor concepts such as "optimization", isolate themselves from other social sciences, and deal with important social problems with a sense of prestigious mission. The essence of the research process is to find a solution, not just the tool that enables the solution to be found.

3. Methodology

The article aims at providing guidance on selecting the appropriate research approach for different research contexts by comparing the importance of using suitable methods and techniques in both idiographic and nomothetic approaches. The analysis of literature conducted in this study identified a gap in knowledge regarding the selection of appropriate research approaches, idiographic or nomothetic, as well as the methods and techniques used in the research process in management sciences. The identified knowledge gap and the formulated research purpose led to the development of detailed research questions:
RQ1. Which of the listed procedures are the most important in the research process in management sciences?
RQ2. Which of the listed methods are the most important in the research process in management sciences?
RQ3. Which of the listed techniques are the most important in the research process in management sciences?
RQ4. Which of the listed research methods should be used in the research processes in management sciences?

3.1. Research method

To achieve the desired objective and answer the research questions the author conducted international quantitative research on an expert group of academic researchers engaged in management sciences research. The questionnaire was designed after conducting a literature review of research methodology and engaging in discussions with other researchers. The

survey comprised three sections. The first section included five questions that enquired about the significance of approaches, processes, methods, and techniques used in the research process in management sciences. The second section had 33 questions on the problem of enhancing the research process. The third section was metric-based and included three questions. The questionnaire was primarily composed of closed-ended questions arranged in a matrix format with a five-point Likert scale, which made it possible to optimize the filling time. Only a part of the survey results was used for this article, which pertained to the issues discussed and emerged from the research questions (first section). Selected questions covered the issue of research approach (single-choice question) and successively the importance of procedures, methods, and techniques in the research process in management sciences (multiple-choice questions). The surveys were distributed in a print form at conferences dedicated to management sciences and through a pre-prepared email database.

3.2. A Research Sample

The survey applied a theoretical sampling method, which involved selecting experts who had the best knowledge of the subject matter being studied (Bryman, et al., 2020; Oláh et al., 2021). The research was conducted on an international scale, with a survey questionnaire being directed at a group of 23,331 academic researchers associated with the field of management sciences. To ensure representativeness, a sample size was determined based on assumptions such as a fraction indicator p of 50%, an error size of 5% regarding the fraction indicator, and a significance level α of 0.05. After calculations, the minimum sample size required was 385 accurately completed questionnaires. The research resulted in surveying 401 representatives of management science theorists from 45 countries, which satisfied the criteria of sample representativeness. To meet the research objective, the obtained sample was split into two groups based on appropriate idiographic and nomothetic approaches (as shown in Table 1).

Table 1. A list of experts distribution according to the declared research approach

Research approach	N	%
Idiographic	239	59.60
Nomothetic	162	40.40

4. Results

According to the methodological assumptions of this research, the validation of experts' responses to the research questions was carried out by the analysts, taking into account the grouping that included the declared approach to the research process. To verify the structural differences in the responses of both groups, the Two-sample Z-test for Proportions (Wooditch, et al., 2021; Girdler-Brown and Dzikiti, 2018) was used assuming a statistical significance level of alpha equal to 0.05.

Considering the above, the following hypotheses were adopted for each analyzed variable:

Hypothesis 1 (H1). P1 = P2 where alpha ≤ P-value (two-tailed) – there are no significant differences between the groups.
Hypothesis 2 (H2). P1 ≠ P2 where alpha > P-value (two-tailed) – there are significant differences between the groups.

4.1. Applied Procedures in the Research Process in Management Sciences

Based on the collected overall data (Fig. 1), it can be concluded that among the surveyed experts, the case study procedure dominates (71.57%), while the experiment and correlation, indicated by 52.37%, ranked second. The smallest percentage of experts indicated the procedure related to vetting (19.95%).

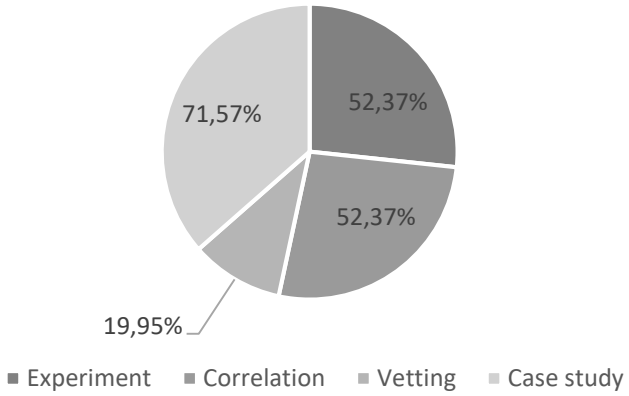

Figure 1. Procedures used by experts in research (N=401)

Interpreting the results, one can observe the current research trend in Management Sciences, which involves conducting in-depth studies in specific contexts or testing hypotheses and developed models in natural conditions. This is also confirmed by the majority of experts declaring an idiographic approach (59.60%), according to which the researcher is interested in individual cases, events, or facts, aiming to better understand social mechanisms.

Analyzing the results of the conducted test (Table 2), it can be observed that the case study, which is often used in management sciences and is a typical manifestation of idiography, is also widely used in a non-methodical approach, according to the experts' opinions (64.81%). Furthermore, both analyzed groups agree only in the case of the low utilization of the vetting procedure. In other procedures, the experts' statements differ.

Table 2. Two-sample Z-test for Proportions on the procedures used by experts

Procedures	Experiment	Correlation	Vetting	Case study
% Idiographic (P1)	59.83%	46.03%	18.83%	76.15%
% Nomothetic (P2)	41.36%	61.73%	21.60%	64.81%
Z-value	3.6348	-3.0895	-0.6827	2.4694
P-value (left-tailed)	0.9999	0.0010	0.2474	0.9932
P-value (right-tailed)	0.0001	0.9990	0.7526	0.0068
P-value (two-tailed)	0.0003	0.0020	0.4948	0.0135

Therefore, it can be concluded that despite receiving similar percentage values of data, the views on the use of specific procedures vary depending on the adopted research approach.

4.2. Methods Used in the Research Process in Management Sciences

Based on the follow chart (Fig. 2) provides valuable insights into the most popular research methods in management sciences, as well as the ones that are not commonly utilized. The data shows that observation (71.57%) and interview (65.09%) are the two most frequently used methods, which is not surprising given that they allow researchers to gather firsthand information about organizational behavior and work processes. Analysis of documentation (64.59%) and poll (63.09%) are also widely used, as they provide a wealth of information about policies, procedures, and attitudes related to management. On the other hand, the method of scenarios (32.92%) and field experiments (30.42%) are less common, possibly due to their high cost or complexity. The other methods are rarely used.

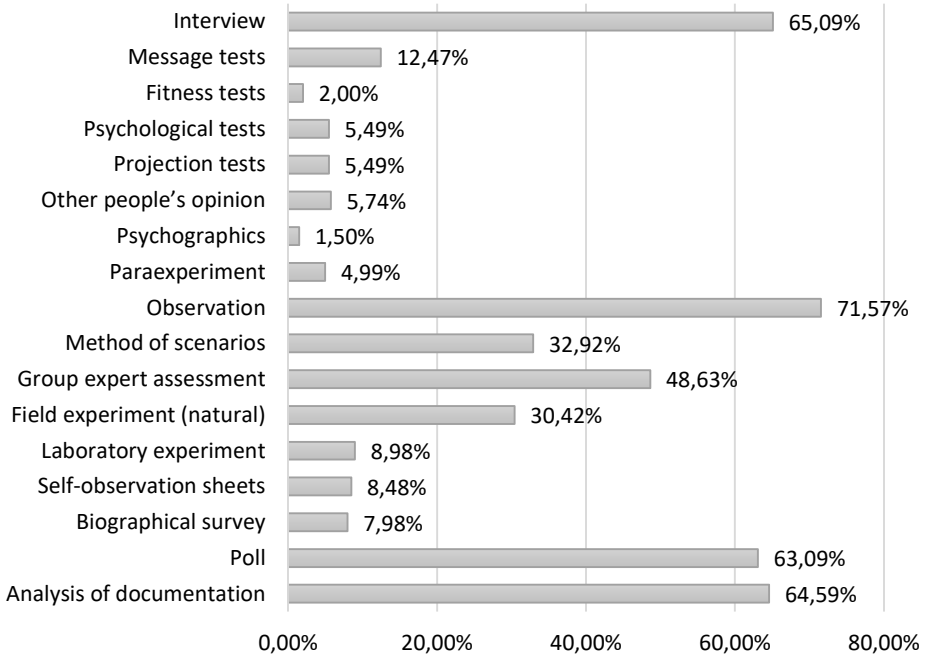

Figure 2. Methods used by experts in research (N=401)

Upon analyzing the obtained test results (Table 3), it is noticeable that there is a significant agreement among experts from both groups regarding the methods used. The only difference in the response structure is observed in the message tests (0.0025) and poll (0.01). Interestingly, both idiographic and nomothetic approaches involve the use of surveys, which are commonly associated with the nomothetic approach, as well as analysis of documentation, interviews, and observation, which are more aligned with the idiographic approach. This suggests that there is a degree of overlap between the two approaches, and that researchers may draw on a variety of methods to achieve their research objectives.

Table 3. Two-sample Z-test for Proportions on the methods used by experts

Methods	Idiographic	Nomothetic	Z-value	P-value (left-tailed)	P-value (right-tailed)	P-value (two-tailed)
Documentation analysis	64.44%	64.81%	-0.0780	0.4689	0.5311	**0.9378**
Poll	68.20%	55.56%	2.5749	0.9950	0.0050	**0.0100**
Biographical survey	8.79%	6.79%	0.7239	0.7655	0.2345	**0.4691**
Self-observation sheets	7.95%	9.26%	-0.4619	0.3221	0.6779	**0.6442**
Laboratory experiment	7.53%	11.11%	-1.2305	0.1093	0.8907	**0.2185**
Field experiment (natural)	28.45%	33.33%	-1.0425	0.1486	0.8514	**0.2972**
Group expert assessment	50.63%	45.68%	0.9729	0.8347	0.1653	**0.3306**
Method of scenarios	34.31%	30.86%	0.7205	0.7644	0.2356	**0.4712**
Observation	71.55%	71.60%	-0.0124	0.4951	0.5049	**0.9901**
Paraexperiment	5.86%	3.70%	0.9723	0.8346	0.1654	**0.3309**
Psychographics	1.26%	1.85%	-0.4829	0.3146	0.6854	**0.6292**
Other people's opinion	4.60%	7.41%	-1.1853	0.1179	0.8821	**0.2359**
Projection tests	6.28%	4.32%	0.8437	0.8006	0.1994	**0.3988**
Psychological tests	5.02%	6.17%	-0.4971	0.3096	0.6904	**0.6191**
Fitness tests	2.09%	1.85%	0.1688	0.5670	0.4330	**0.8660**
Message tests	8.37%	18.52%	-3.0190	0.0013	0.9987	**0.0025**
Interview	65.69%	64.20%	0.3077	0.6209	0.3791	**0.7583**

4.3. Techniques Used in the Research Process in Management Sciences

Based on the follow chart (Fig. 3), it can be concluded that the most frequently used techniques include: analysis of business opinions, observation of real critical events, hidden and participating observation, analysis of informal customer reviews, a survey of standardized open questions, situational interviews, structured interviews, and analysis of reports of employee meetings

These techniques are commonly used in management research and provide valuable insights into various aspects of organizational behavior, customer preferences, and employee engagement. Analysis of business opinions helps researchers to understand the views of key stakeholders and decision-makers within an organization (Moskalenko et al., 2022; Song et al., 2022). Observational techniques, including hidden and participating observation, allow researchers to observe behavior in real-world settings and gain insights into unspoken dynamics within an organization (Ciesielska et al., 2018; Borodin et al., 2021; Yang et al., 2021). Surveys and interviews provide researchers with structured data that can be analyzed quantitatively or qualitatively (Trzeciak, 2020; Prokopenko & Miśkiewicz, 2020; Kharazishvili et al., 2021b), while analysis of reports from employee meetings can provide insights into the concerns and suggestions of employees.

By analyzing the obtained results (Table 4), it can be concluded that experts do not exhibit any specific dominant research techniques. Only in the case of the idiographic approach, there is a frequent use of the analysis of business opinion and observations of real critical events. Furthermore, except for six instances, the opinions of experts from both groups are in agreement.

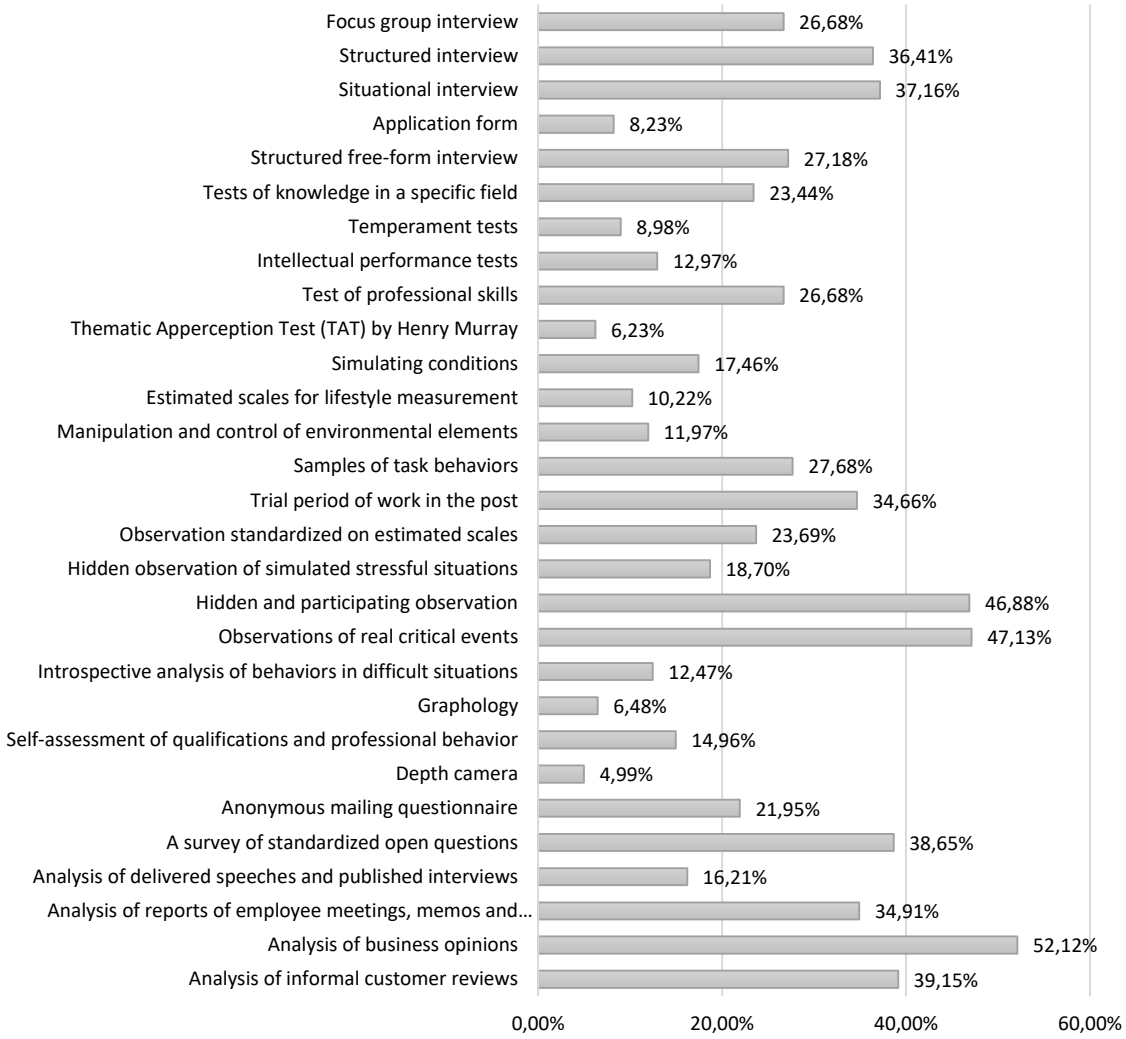

Figure 3. Techniques used by experts in research (N=401)

Table 4. Two-sample Z-test for Proportions on the techniques used by experts

Techniques	Idiographic	Nomothetic	Z-value	P-value (left-tailed)	P-value (right-tailed)	P-value (two-tailed)
Analysis of informal customer reviews	43.10%	33.33%	1.965	0.975	0.025	**0.049**
Analysis of business opinions	**56.07%**	46.30%	1.922	0.973	0.027	**0.055**
Analysis of reports of employee meetings, memos and ordinan	35.98%	33.33%	0.546	0.708	0.292	**0.585**
Analysis of delivered speeches and published interviews	19.25%	11.73%	2.005	0.977	0.023	**0.045**
A survey of standardized open questions	38.08%	39.51%	-0.289	0.386	0.614	**0.773**
Anonymous mailing questionnaire	21.76%	22.22%	-0.110	0.456	0.544	**0.912**
Depth camera	5.02%	4.94%	0.037	0.515	0.485	**0.970**
Self-assessment of qualifications and professional behavior	15.06%	14.81%	0.068	0.527	0.473	**0.946**
Graphology	8.37%	3.70%	1.861	0.969	0.031	**0.063**
Introspective analysis of behaviors in difficult situations	13.39%	11.11%	0.678	0.751	0.249	**0.498**
Observations of real critical events	**51.05%**	41.36%	1.907	0.972	0.028	**0.057**
Hidden and participating observation	48.54%	44.44%	0.806	0.790	0.210	**0.420**
Hidden observation of simulated stressful situations	22.59%	12.96%	2.427	0.992	0.008	**0.015**
Observation standardized on estimated scales	25.10%	21.60%	0.809	0.791	0.209	**0.419**
Trial period of work in the post	32.64%	37.65%	-1.036	0.150	0.850	**0.300**
Samples of task behaviors	24.27%	32.72%	-1.855	0.032	0.968	**0.064**
Manipulation and control of environmental elements	10.04%	14.81%	-1.445	0.074	0.926	**0.149**

Techniques	Idiographic	Nomothetic	Z-value	P-value (left-tailed)	P-value (right-tailed)	P-value (two-tailed)
Estimated scales for lifestyle measurement	10.46%	9.88%	0.189	0.575	0.425	**0.850**
Simulating conditions	15.06%	20.99%	-1.534	0.063	0.937	**0.125**
Thematic Apperception Test (TAT) by Henry Murray	6.69%	5.56%	0.463	0.678	0.322	**0.643**
Test of professional skills	24.69%	29.63%	-1.098	0.136	0.864	**0.272**
Intellectual performance tests	15.48%	9.26%	1.820	0.966	0.034	**0.069**
Temperament tests	11.72%	4.94%	2.330	0.990	0.010	**0.020**
Tests of knowledge in a specific field	21.76%	25.93%	-0.967	0.167	0.833	**0.334**
Structured free-form interview	26.78%	27.78%	-0.221	0.413	0.587	**0.825**
Application form	8.79%	7.41%	0.493	0.689	0.311	**0.622**
Situational interview	38.91%	34.57%	0.883	0.811	0.189	**0.377**
Structured interview	35.15%	38.27%	-0.638	0.262	0.738	**0.523**
Focus group interview	22.18%	33.33%	-2.479	0.007	0.993	**0.013**

4.4. Recommended Methods in the Research Process in Management Sciences

The conclusions drawn from the analysis (Table 5) recommend the five most commonly used research methods in management sciences:

1. Documentation analysis.
2. Poll.
3. Group expert assessment.
4. Observation.
5. Interview.

Table 5. Two-sample Z-test for Proportions on the methods recommended by experts

Methods	Idiographic	Nomothetic	Z-value	P-value (left-tailed)	P-value (right-tailed)	P-value (two-tailed)
Analysis of documentation	**73.22%**	**71.60%**	**0.356**	**0.639**	**0.361**	**0.722**
Poll	**74.06%**	**58.64%**	**3.243**	**0.999**	**0.001**	**0.001**
Biographical survey	7.53%	6.79%	0.281	0.611	0.389	**0.779**
Self-observation sheets	8.79%	12.35%	-1.154	0.124	0.876	**0.248**
Laboratory experiment	7.53%	13.58%	-1.983	0.024	0.976	**0.047**
Field experiment (natural)	26.78%	32.10%	-1.153	0.124	0.876	**0.249**
Group expert assessment	**51.46%**	**48.15%**	**0.652**	**0.743**	**0.257**	**0.515**
Method of scenarios	31.80%	30.25%	0.329	0.629	0.371	**0.742**
Observation	**74.48%**	**62.35%**	**2.591**	**0.995**	**0.005**	**0.010**
Paraexperiment	5.02%	3.09%	0.943	0.827	0.173	**0.345**
Psychographics	0.84%	1.85%	-0.899	0.184	0.816	**0.369**
Other people's opinion	3.35%	5.56%	-1.077	0.141	0.859	**0.282**
Projection tests	5.44%	4.94%	0.221	0.587	0.413	**0.825**
Psychological tests	5.44%	5.56%	-0.050	0.480	0.520	**0.960**
Fitness tests	0.84%	1.23%	-0.393	0.347	0.653	0.694
Message tests	10.88%	22.22%	-3.083	0.001	0.999	0.002
Interview	**65.69%**	**59.88%**	**1.186**	**0.882**	**0.118**	**0.236**

Furthermore, these methods are recommended by the majority of experts in both groups studied. These conclusions also emphasize the role of methodological triangulation, in which multiple methods are used to study a single phenomenon.

The use of multiple methods in research can increase the validity and reliability of findings by cross-validating results and addressing potential biases or limitations of individual methods. For example, combining observation and interviews can provide a more comprehensive understanding of a phenomenon, as observation may reveal certain behaviors while interviews can provide insights into underlying motivations or attitudes (Natow, 2020; Dzwigol et al., 2020b; Trzeciak et al., 2022a). The use of triangulation is particularly relevant in management sciences, where complex social and organizational phenomena often require a multifaceted approach (Ngulube, 2015; Dzwigol, 2020; Dzwigol & Dzwigol-Barosz, 2020). Therefore, researchers are encouraged to consider using multiple methods in their research design, taking into account the strengths and weaknesses of each method and how they can complement each other to provide a more nuanced understanding of the research question at hand.

5. Discussion

In the following discussion, the author provides answers to the research questions posed and indicated the interpretation of the results obtained with respect to the current literature on the subject.

Which of the listed procedures are the most important in the research process in management sciences?

According to the obtained research results and statistical tests conducted, each of the procedures subjected to the study is important. However, the dominant procedure among the group of surveyed experts is the case study.

This suggests that there is a certain degree of subjectivity involved in the choice of research procedures and that the researchers need to carefully consider the pros and cons of each approach to align it with their research objectives. Moreover, the results imply that there is a need for a more comprehensive and systematic approach to method selection that would account for both the idiographic and nomothetic perspectives. It is also worth noting that the study highlights the importance of using multiple methods to triangulate the research findings and minimize the potential biases associated with single-method research. In sum, the analysis of the test results underscores the need for a critical and reflective approach to method selection in management research and highlights the complexity of the research process, which involves a range of methodological, theoretical, and ethical considerations.

Which of the listed methods are the most important in the research process in management sciences?

Based on the interpretation of the obtained results, the experts demonstrate agreement in both groups regarding the importance of the following methods in the research process in management sciences: interview; observation; analysis of documentation; poll; group expert assessment.

In addition, it is worth noting that despite the slight variation in responses, the experts from both groups prioritize similar methods of research. This reinforces the idea that certain methods are widely accepted and have become standard practices in the field of management sciences. It is also interesting to see that message tests, which are a relatively newer research method, are not as commonly utilized as the more traditional methods. This may indicate that researchers are cautious when it comes to adopting new techniques, and prefer to stick with methods that have been tried and tested. Overall, the results of the test highlight the importance of carefully selecting the appropriate research methods based on the research question and objectives, as well as taking into consideration the underlying theoretical frameworks and assumptions of the chosen approach.

Which of the listed techniques are the most important in the research process in management sciences?

According to the obtained research results, there are no dominant research techniques among experts in management sciences.

The lack of a dominant research technique suggests that researchers in management sciences may be flexible in their approach and are willing to draw on various methods depending on their research objectives. The agreement between experts from both groups also implies a certain degree of consensus in the field regarding the utility and effectiveness of these techniques. The six instances where there is disagreement may be an area for further exploration to determine the reasons for the difference in opinion and to identify potential areas for improvement in the research process. Overall, the analysis of the results provides insight into the research practices in management sciences and highlights the importance of considering multiple methods to achieve the desired research outcomes.

Which of the listed research methods should be used in the research processes in management sciences?

According to research results, experts unanimously point to five methods that should be used in research processes in management sciences, namely: analysis of documentation, poll, group expert assessment, observation, and interview.

Documentation analysis: This method involves the systematic examination of existing documents, such as company records (Chygryn et al., 2020; Saługa et al., 2021), financial statements (Dacko-Pikiewicz, 2019; Kwilinski et al., 2020c), or policy documents (Miśkiewicz, 2021b; Kotowicz et al., 2022), to gather information relevant to the research question (Rapley, 2018). It is useful in management sciences as it provides a reliable and objective source of data that can be analyzed for trends, patterns, or themes.

Poll: A poll is a method of collecting data from a large number of people through a set of questions (Stuss et al., 2019; Kwiliński et al., 2021b; Trzeciak & Banasik, 2022). It is useful in

management sciences for gathering quantitative data on attitudes, opinions, or behaviors of a group of people.

Group expert assessment: This method involves bringing together a group of experts in the field to evaluate a research question (Fu et al., 2015; Czyżewski et al., 2019; Drożdż et al., 2020a). It is useful in management sciences as it enables the aggregation of diverse opinions and perspectives, leading to a more comprehensive understanding of a phenomenon.

Observation: Observation involves the systematic and objective recording of behaviors, events, or phenomena in their natural setting (Ciesielska et al., 2018; Dementyev & Kwilinski, 2020; Tkachenko et al., 2019). It is useful in management sciences as it allows researchers to study behaviors or practices that cannot be easily reported by individuals.

Interview: Interviews involve the collection of data through a face-to-face or phone conversation with an individual (Trzeciak & Jonek-Kowalska, 2021; Kuzior et al., 2022). They are useful in management sciences for gathering detailed and in-depth information on attitudes, opinions, or experiences that cannot be captured by other methods.

In summary, the recommended research methods in management sciences are chosen based on their capacity to bear reliable and objective data, provide diverse perspectives, and enable in-depth analysis of complex social and organizational phenomena. Researchers are encouraged to select appropriate methods based on the research question and to study using multiple methods for triangulation to enhance the validity and reliability of their findings.

6. Conclusions

The purpose of the article was to provide guidance on choosing an appropriate research approach for different research contexts by comparing the significance of using appropriate methods and techniques in both idiographic and nomothetic approaches. The results of the survey among experts indicate the importance of various methods and techniques in the research process in management sciences. Both nomothetic and idiographic approaches are important in management research, and their application depends on the research purpose and the type of data being collected.

Furthermore, the results suggest the need for further research to compare the effectiveness of different methods in data analysis and to develop new techniques that enable more comprehensive data analysis in management sciences. It is also important for researchers to be aware of different research methods and to be able to adapt their approach to the specific research. Moreover, the choice of research procedures is subjective, and researchers must carefully consider the advantages and deficiencies of each approach. Therefore, a comprehensive and systematic approach to selecting a method is necessary taking into account both idiographic and nomothetic perspectives. In addition, the use of multiple methods for triangulating research results can help minimize potential errors associated with studies based on a single method.

Given the complexity of the research process, which involves a range of methodological, theoretical, and ethical considerations, a critical and reflective approach to selecting a method is essential in management research. Survey results should be interpreted with caution due to the limitations of the study. Firstly, the study was conducted on a purposive group of experts, which may influence the subjective interpretation of results. Moreover, the study was based only on one type of data – surveys, which may affect the limitations of the results. Future research should include a more diverse range of respondents and different sources of data, such as interviews and observations. The practical implications of the research results can include many actions. Firstly, researchers should consider the appropriate selection of research methods and techniques depending on the purpose of the study and the type of data being collected. It is also important to pay attention to the quality and usefulness of the data for further analysis. Secondly, researchers should be aware of different research methods and techniques to be able to use them in the process of making business decisions. This knowledge can help use available resources effectively, increase the efficiency of actions, and minimize the risk of decisions made.

7. Acknowledgements

The author is very grateful to the anonymous referees for their helpful comments and constructive suggestions.

8. Presenting the sources of funding

This research received no external funding.

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