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ORIGINAL ARTICLE

Corporate Strategy Development: Insights from Military Strategic Practices

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Abstract

This study examines corporate strategy development through the lens of military strategic practices, highlighting the parallels between military and business approaches. It draws on data from a survey conducted among experienced Czech managers and management students, analysing their use of strategic tools, data preferences, and operational methodologies. Advanced statistical techniques, including Principal Component Analysis (PCA) and cluster analysis, reveal differences in the emphasis placed on macroeconomic indicators and internal processes by managers versus the preference for tools like SWOT and PESTLE among students. Key findings underscore the significance of protecting competitive intelligence and adopting adaptive methodologies to enhance decision-making. The study bridges theory and practice, offering practical recommendations for integrating military-inspired strategies into business education and corporate frameworks.

Keywords

Strategic management; military strategy; business intelligence; competitive intelligence; contra competitive intelligence; risk management; Balanced Scorecard; KPI.[5]

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Introduction

Strategic management is a key element in both military and business contexts. Although both approaches have evolved in different environments with distinct goals, there are many points of convergence and similarities between them (Grattan 2002, 39-112). Military strategies traditionally focus on achieving victory in conflict through resource optimization and rapid decision-making, while business strategies emphasize sustainability and competitiveness in a dynamic market environment (Ozleblebici et al. 2015, 17-31). While military strategies often operate in environments characterized by high levels of uncertainty and information scarcity, business strategies face similar challenges in the context of market volatility and unpredictable exogenous influences (Altman 2000, 36-41).

Recent research increasingly emphasizes the convergence of military and business approaches in areas such as adaptation to growing complexity and the dynamics of modern environments, both on the battlefield and in the market. Onet and Ciocoi-Pop (2022, 575-584) examine historical parallels between military and business strategies, highlighting shared goals and objectives in both fields. The contribution of military philosophy to the business environment allows companies to draw valuable lessons from military thinking. Keller (2023, 159-175) explores how the principles of military doctrine can be applied to business management, particularly in turbulent and unpredictable situations. The current context of a complex geopolitical and economic environment underscores the growing need for flexible strategies and adaptive management to navigate turbulent conditions (Iancu, Dinicu 2023, 123-135). Boșcoianu et al. (2016, 323-329) similarly emphasize the importance of flexibility and adaptability in resource management and decision-making under conditions of uncertainty in hostile, turbulent, and highly unstable environments.

Lara and Costa (2021, 8-21) confirm that military strategies can be used by managers when making decisions and defining a company's market position. Smith (2022, 1209-1234) concludes through comparative analysis that companies can benefit from the application of military strategies, particularly in the areas of rapid decision-making[6] and efficient resource utilization, while military organizations can enhance their flexibility and innovation by drawing inspiration from business approaches.

A leading domestic advocate for the application of war principles in the business sphere, Associate Professor František Bartes, directly states: “To successfully do business in a saturated and demanding market, where competition is fierce and cutthroat, means taking away some of the profits and market share from competitive firms. In this market, competitive offers clash in a battle for the customer, according to the rules of martial arts[7]. I dare say that in such a market, business is a great war” (Bartes

[6] As part of the categorization of desirable capabilities and skills of a professional manager, this article mainly deals with the category of hard skills – “professional and system knowledge and skills necessary for work” (Ullrich et al. 2019).

[7] It is thus possible to maintain a beneficial coalition of cooperative relations for society (at the company - stakeholders level) only by reflecting the framework of antagonistic conflicts at the company - competitor level, between which there is a struggle for market space (see Cenek, Mikuš, Dugas 2024, 113- 132).

1997, 10-11). However, addressing the key issue so integral to the military approach to strategy - knowledge of one's environment, including the approaches used in the creation and management of strategy by relevant business entities to defend their market position - is often inadequate in the domestic environment (Bartes 2022, 13). The purpose of this contribution is, therefore, to aid in the development of strategic management methods by utilizing the principles and approaches of war strategies to defend a company's market position in terms of solving fundamental questions, especially: (i) what information market participants (potential competitors/rivals) focus on gathering from the business environment; (ii) what modus operandi market participants apply; and (iii) what can be learned from the most experienced strategists.

Parallels of Strategic Management in The Military and Business Environments

Military operations are largely dependent on the availability and quality of intelligence information. Anderson and Kreps (2023, 240-256) emphasize that accurate and up-to-date data enable military forces to identify enemy weaknesses, anticipate their moves, and take strategic measures. Galliot (2022, 133-150) explains that the analysis of intelligence information and its subsequent synthesis into insights about the enemy's modus operandi can be crucial in preventing attacks or minimizing their impacts.

Luttwak (2001) also considers modus operandi an integral part of any military strategy. It refers to the characteristic way, an army or unit conducts its operations and achieves its strategic goals through regular patterns of behaviour and procedures, proven effective over time in a given context. While the term implies standardized procedure, modern warfare strategy emphasizes the ability to adapt the modus operandi to new situations, depending on enemy actions or environmental changes, thus maintaining the effectiveness of operations (Van Creveld, 2000). Johnson (2023, 78-95) describes how the analysis of enemy units' modus operandi during a conflict leads to the successful adaptation of strategy and eventual victory. Tzu et al. (2023, 310-325) suggest that a deep understanding of the enemy's modus operandi can lead to better decision-making at the strategic level, which is crucial for successful warfare.

In the business context, modus operandi relates mainly to the use of strategic tools that form an integral part of strategic decision-making and planning. Mintzberg (2009) directly describes various strategic schools and their specific modus operandi for strategy development and management, which becomes routine in the strategic management of an organization. Whittington (2006, 613-634) argues that strategic tools and techniques are not merely theoretical constructs but practical realities that shape managers' daily activities and decisions.

The dependency of military strategies on the availability and quality of intelligence information is analogous to the same dependency on business strategies. Knowledge gleaned from facts about the business environment plays a key role in strategic adaptation (Sulaeman et al. 2023, 208-214). The gathering, storage, and distribution of knowledge facilitate the identification of business

The strategic management of the company is thus found in accordance with the laws of the ancient system of combat strategy in the role of complex starting points of today's approaches to war strategies.

trends, stakeholder knowledge, competitor insights, understanding of customer needs, and the development of relevant products. Business environment data are critical to corporate strategy, as they moderate the relationship between big data management and business agility (Chen, Xiao 2023, 169). In line with the outlined critical importance of data for strategy management, the creation of data patterns to facilitate data acquisition for strategy formulation is gaining importance (Thanos 2023). In this regard, two key concepts - Business Intelligence (BI) and Competitive Intelligence (CI) - play a crucial role in modern business and also have their roots and parallels in military strategies (Bartes 2022).

BI involves technologies and procedures that allow companies to analyze both historical and current data for effective decision-making (Negash 2004, 177-195). BI focuses on optimizing internal processes and maximizing organizational performance (Marr 2023). CI includes not only monitoring competitors but also analyzing market trends, industry changes, and other external factors that may affect a company's strategic position, with the primary goal of understanding the dynamics of the competitive environment (Fleisher, Bensoussan 2022). In a sense, Counter Competitive Intelligence (CCI)[8] serves as a systematic preventive measure and security strategy for protecting critical corporate information. CCI focuses on identifying, anticipating, and eliminating threats that may arise from the CI activities of competing companies, especially regarding the acquisition of internal data and strategic information that could threaten the company's competitiveness and market position (Fleisher, Bensoussan, 2015).

In the context of military strategies, BI, CI, and CCI represent the equivalent of intelligence services and military planning (Widjajanto 2015), while in the business context, they are indispensable components for strategic management and the development of competitive advantage (Rouach, Santi 2001, 552-559).

From the facts outlined, the critical importance of data acquisition and the application of specific procedures (modus operandi) for the formulation and management of military strategies becomes clear, and these two variables exhibit an analogous significance for the development and management of corporate strategies. Given the indicated insufficient attention paid to these two key metrics (in line with the principles of war strategies) in business practice, this article focuses closely on these defined areas.

Methodology

The article draws on the tradition of methodologically oriented contributions focused on the practical applications of methods, techniques, and tools in the context of business management (e.g., Bočková et al. 2015, 709-715; Busu 2018, 645-654; Ross 2018, 2859-2876; Abedian 2022, 139-158). It also addresses the issue of developing systematic data collection and evaluation in the competitive intelligence of domestic business entities (e.g., Molnár 2012; Bartes 2022).

[8] Given that in the context of the business environment, CSR does not have clearly defined boundaries (Mikulka, Nekvapilová, Fedorková, 2020), CI and CCI additionally provide an ethical framework for working with the external business environment and its elements.

This paper aims to systematically examine and define key sets of data inputs from the business environment that managers use in the creation and management of business strategies. The study focuses on identifying the data that should be targeted by Business Intelligence (BI) and Competitive Intelligence (CI) systems of business entities to maintain a competitive market position. Additionally, the goal is to evaluate what data should be protected in terms of corporate strategy defence through Counter Competitive Intelligence (CCI) to prevent CI activities from competing businesses. Another objective is to analyze and compare the most commonly used strategic tools (modus operandi) for strategy creation and management between experienced managers and the emerging generation of managers. The study also examines the differences in data collection and use of strategic tools between these two groups. In line with these objectives, the following research questions are formulated:

- *RQ1: What are the main sets of data inputs from the business environment that managers use for strategy creation and management?*[9]
- *RQ2: What data should be protected by businesses through CCI to defend their corporate strategy from CI activities of competing firms?*
- *RQ3: What "modus operandi" in terms of applied strategic tools are most frequently used by managers in strategy creation and management?*

To meet the goal of answering the formulated research questions, primary research was conducted with two groups of respondents, allowing the identification of mutual relations[10]. The first group consists of leading domestic managers, established through years of practice in strategic management of business entities. These managers participate in the prestigious "Manager of the Year" competition, which has been organized by the Czech Management Association (CMA) for over thirty years (CMA 2024, online). The second group consists of the new generation of managers involved in business strategy, represented by practising students from Newton University. The participating students from Newton University were actively engaged in practical projects related to strategic management, particularly focusing on (i) their businesses, (ii) collaborations with businesses on a strategic level, (iii) case studies or simulations (in line with the focus of the study on practising managers from business practice). This engagement aimed to ensure the relevance and applicability of their perspectives, making them valuable proxies for understanding emerging management approaches. The student group was used following the approach by Wright et al. (2013, 92-125)[11], who consider practising university students in management as highly desirable respondents for research in strategic management.

[9] Analogously, the question also carries the meaning: What data should BI/CI of business entities focus on to defend their market position against competitors?

[10] When the implicit question is thus addressed: "What is the difference in data collection and the use of 'modus operandi' in terms of applied strategic tools for strategy creation and management between leading domestic managers and the emerging generation of managers?"

[11] This is in line with several other authors, such as Jarzabkowski and Whittington (2008), Walsh (2011).

The primary research was conducted through questionnaires. For the CMA, the questionnaires were distributed by the institution itself, and attached to applications for the Manager of the Year competition. Based on the content of these questions, a similar set of questions was formulated for the questionnaires given to students enrolled in the “Strategic Management” course (for bachelor's students) and “Strategic Management II” (for master's students) at Newton University in the spring semester of 2024[12]. The total number of completed questionnaires was 50 for managers and 50 for students. Five questionnaires from the managers were discarded due to incomplete responses or unclear information. Three questionnaires from students were excluded due to inconsistent data or missing key responses. Thus, the final sample[13] consisted of 45 questionnaires from managers and 47 from students[14].

A combination of advanced statistical tools was used to evaluate the data and provide a comprehensive analysis. Principal Component Analysis (PCA) was applied to reduce dimensionality and identify key factors (Hasan, Abdulazeez 2021). This tool helps reveal which factors have the greatest influence on data variability (Mao 2005, 339-344) and how these differ between groups (Jolligge, 2002). In this way, complex data can be simplified, and the main components (Skalski, Richins, Townsend 2018) that are most important for decision-making by managers and students can be identified. PCA serves as a basis for cluster analysis.

The T-test was used to determine whether the differences in priorities between managers and students are statistically significant. This provides concrete evidence of which factors are perceived differently between the two groups. PCA simplifies data by reducing dimensionality and identifying patterns, while t-tests assess mean differences between groups. As such, the methods complement each other in understanding data variability and group differences but do not directly validate each other (Loku, Loku 2023).

Cluster analysis was employed to uncover subgroups that exhibit similar priorities (Jain, Murty, Flynn 1999, 264-323). This method can identify whether there are segments within both groups that share similar views, which could be important for targeting strategies or training. Correlation analysis was

[12] The questionnaires can be provided upon request from the authors of the paper.

[13] It is mainly represented by manufacturing and processing, information technology and wholesale trade, excluding motor vehicles. Specific CZ-NACE codes are available on request from the authors.

[14] In terms of the limitations of the conducted research, several constraints should be considered that may affect the accuracy and interpretation of the results. Incomplete responses had to be excluded from the analysis, which reduced the sample size and may have increased the variability of the results. Furthermore, there were potential errors in responses, as some answers were subjective or could have been influenced by respondents' misunderstanding of the questions. Among managers, the estimated margin of uncertainty ranged between approximately 5–10%, primarily due to subjective responses to open-ended questions. For students, the margin of uncertainty was higher, estimated at 7–12%, due to their limited practical experience and ability to accurately answer some practical questions. The diversity of sources from the two groups of respondents may lead to variability in the accuracy and depth of responses, as students, even in the role of practicing managers, may provide less precise or less in-depth answers compared to experienced managers. The representativeness of the sample is also key, as regional and industry-specific influences may not fully reflect the broader population. These factors may impact the study's outcomes, particularly the reliability of conclusions and their generalizability. Therefore, the results are interpreted with these limitations in mind.

also applied specifically to understand the relationship between the strategic tools used. This tool helps to comprehend how the preferences of both groups are interconnected (Senthilnathan 2019). To ensure accuracy and reliability of the results, methods for handling extreme values, inconsistent, and missing data, such as winsorization and imputation, were included in the analysis. These steps were necessary to eliminate the influence of outliers and ensure proper categorization of the data (Cohen et al. 1979, 239-241).

In the application of advanced statistical tools, it is important to note that seemingly similar average frequency values (which may appear as the most intuitive approach to data evaluation) can conceal significant differences that only become evident with deeper analysis, such as cluster analysis combined with PCA (Principal Component Analysis)[15]. The combination of these methods provides rich and multi-layered insights into the data, essential for fulfilling the aims of this paper.

Data Obtained From The Business Environment

Independent samples t-tests for all factors between managers and students reveal whether statistically significant differences exist in the prioritization of individual factors in the form of data collected from the business environment. The following table (Table 1) contains the t-test results for each factor.

[15] In this way, cluster analysis combined with PCA allows for the discovery of hidden differences in preferences and the use of tools between different user groups, even when basic statistics, such as average values, may suggest similarities.

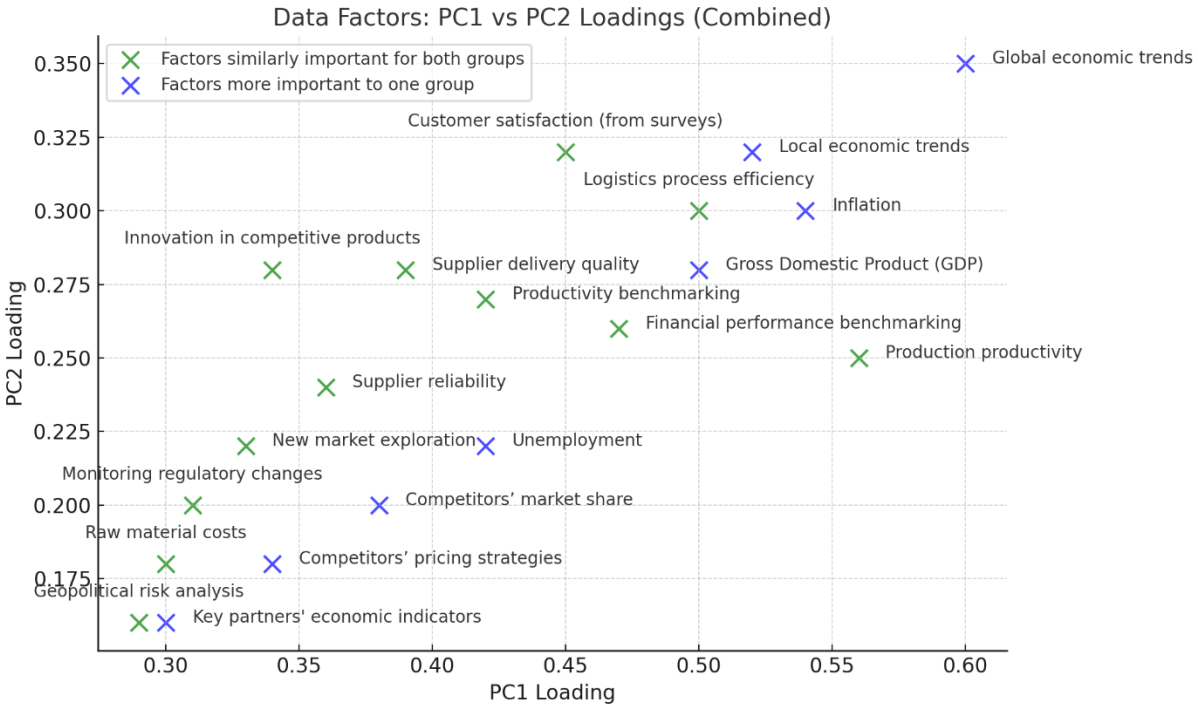
Table 1: T-test results for all factors

Factor	*Managers (n = 45)*	*Students (n = 47)*	*t-statistic*	*p-value*	*Statistical significance*
Customer satisfaction (from surveys)	14	10	2.04	0.045	Yes
Supplier delivery quality	11	9	1.32	0.191	No
Supplier reliability	10	8	1.15	0.254	No
Productivity benchmarking	10	7	1.83	0.071	Borderline
Logistics process efficiency	13	6	3.57	0.0007	Yes
Innovation in competitive products	9	10	-0.53	0.597	No
Production productivity	15	5	4.76	7.65e-06	Yes
Financial performance benchmarking	12	3	4.99	2.46e-06	Yes
New market exploration	9	4	2.49	0.015	Yes
Monitoring regulatory changes	8	4	1.63	0.107	Borderline
Raw material costs	7	4	1.11	0.272	No
Geopolitical risk analysis	6	3	1.35	0.181	No
Global economic trends	14	6	5.05	1.13e-05	Yes
Local economic trends	12	5	3.49	0.001	Yes
Inflation	12	3	4.63	5.05e-06	Yes
Gross Domestic Product (GDP)	10	3	3.67	0.0006	Yes
Unemployment	8	2	3.13	0.002	Yes
Competitors' market share	10	8	0.79	0.432	No
Competitors' pricing strategies	8	7	0.51	0.612	No
Key partners' economic indicators	5	2	1.59	0.116	No

(Source: authors)

The t-test analysis has thus demonstrated that significant differences exist in the prioritization of most macroeconomic factors and factors related to internal company processes between managers and students. These differences may be due to the varying experiences and roles of both groups within the business environment.

Figure 1: Data factors similarly important for both groups and more preferred by one group



(Source: authors)[16]

Cluster analysis using K-means was applied to the results of PCA (see Appendix 1) to identify subgroups of factors similarly preferred by both managers and students. The results of the cluster analysis suggest that, despite differences, there are areas where convergence of strategies between the two groups could occur. The cluster of factors important for both groups (FIgure 1) includes factors that are relatively evenly preferred by both managers and students. This indicates that these factors are perceived as key to corporate strategy creation and management by both groups. The cluster of factors more preferred by one group (Figure 1) contains factors that show stronger preferences either among managers or students. These differences reflect the varying perspectives and focus of both groups.

Modus Operandi In The Form Of Strategic Tools

The t-test conducted for each of the strategic tools used by managers and students as modus operandi for strategy creation and management helps to determine whether there are statistically significant differences between these two groups.

[16] The standard deviation varies for similarly important factors for managers in the range of 0,4 – 0,8 and for students in the range of 0,2 – 0,5. For factors more preferred by one group for managers 0,4 – 0,8 and for students 0,2 – 0,4.

Table 2: T-test results for Strategic Tools

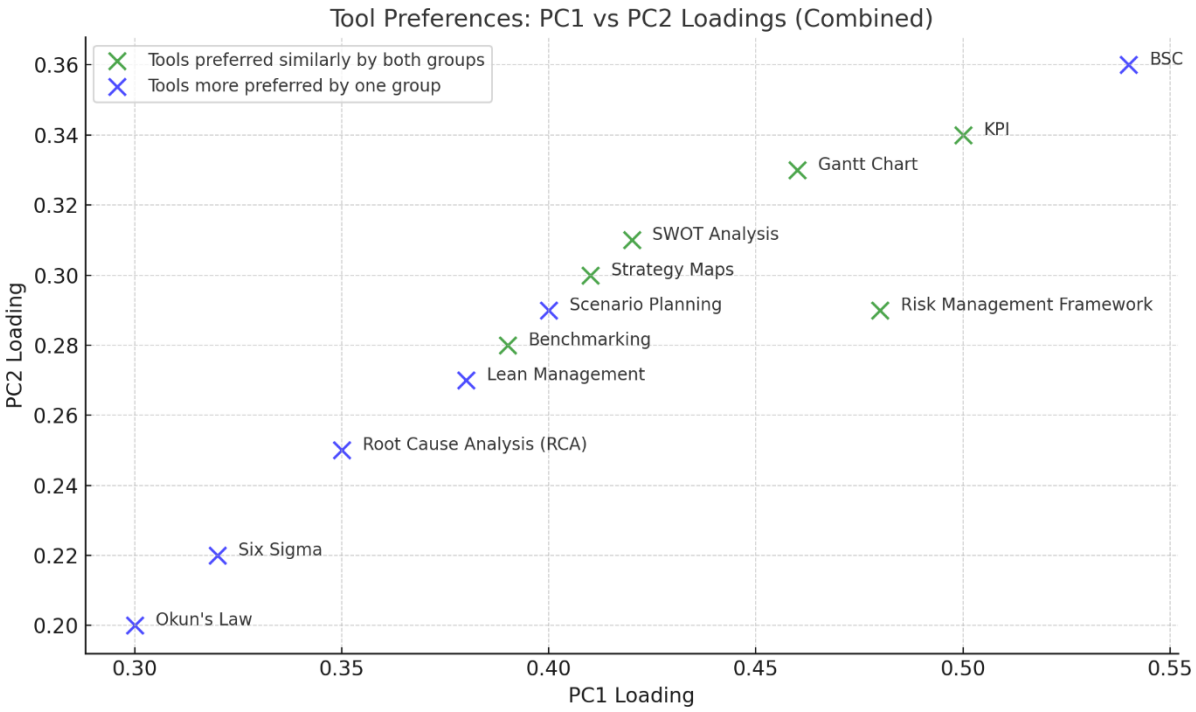
Tool/Method	*Managers*	*Students*	*T-statistic*	*P-value*	*Statistical Significance*
Balanced Scorecard	18	13	2.12	0.037	Yes
Key Performance Indicators	20	14	2.78	0.007	Yes
SWOT Analysis	15	16	-0.45	0.657	No
PESTLE Analysis	12	11	0.45	0.656	No
Porter's Five Forces	10	7	1.30	0.198	No
Business Process Reengineering	11	N/A	-	-	N/A
Benchmarking	14	10	1.72	0.089	Borderline
Strategy Maps	13	12	0.48	0.631	No
Lean Management	12	8	1.61	0.112	No
Six Sigma	9	N/A	-	-	N/A
Cost-Benefit Analysis	10	9	0.45	0.656	No
Risk Management Framework	16	11	2.10	0.038	Yes
Stakeholder Analysis	14	N/A	-	-	N/A
SMART Goals	17	13	1.53	0.130	No
Scenario Planning	11	12	-0.45	0.656	No
Okun's Law	8	7	0.32	0.752	No
Gantt Chart	15	14	0.29	0.774	No
Balanced Scorecard Dashboard	13	10	1.07	0.287	No
Total Quality Management	10	10	0.00	1.000	No
Root Cause Analysis	9	8	0.32	0.752	No

(Source: authors)

The overall results of the T-tests (Table 2) indicate that managers tend to prefer certain strategic tools more than students, particularly those focused on performance measurement and risk management. However, no significant differences were found for several tools, suggesting that both groups share a similar approach to some aspects of strategic management.

The analyzed strategic tools are divided into two main clusters based on their average frequency of use among managers and students, standard deviations, and PCA loadings (see Appendix 2). The first cluster (Figure 2) includes tools that are widely used by both managers and students. The PCA loadings suggest that these factors significantly contribute to the overall data variability and have a high influence on the principal components, indicating their universal importance in strategic management.

Figure 2: Tools preferred similarly by both groups and more preferred by one group



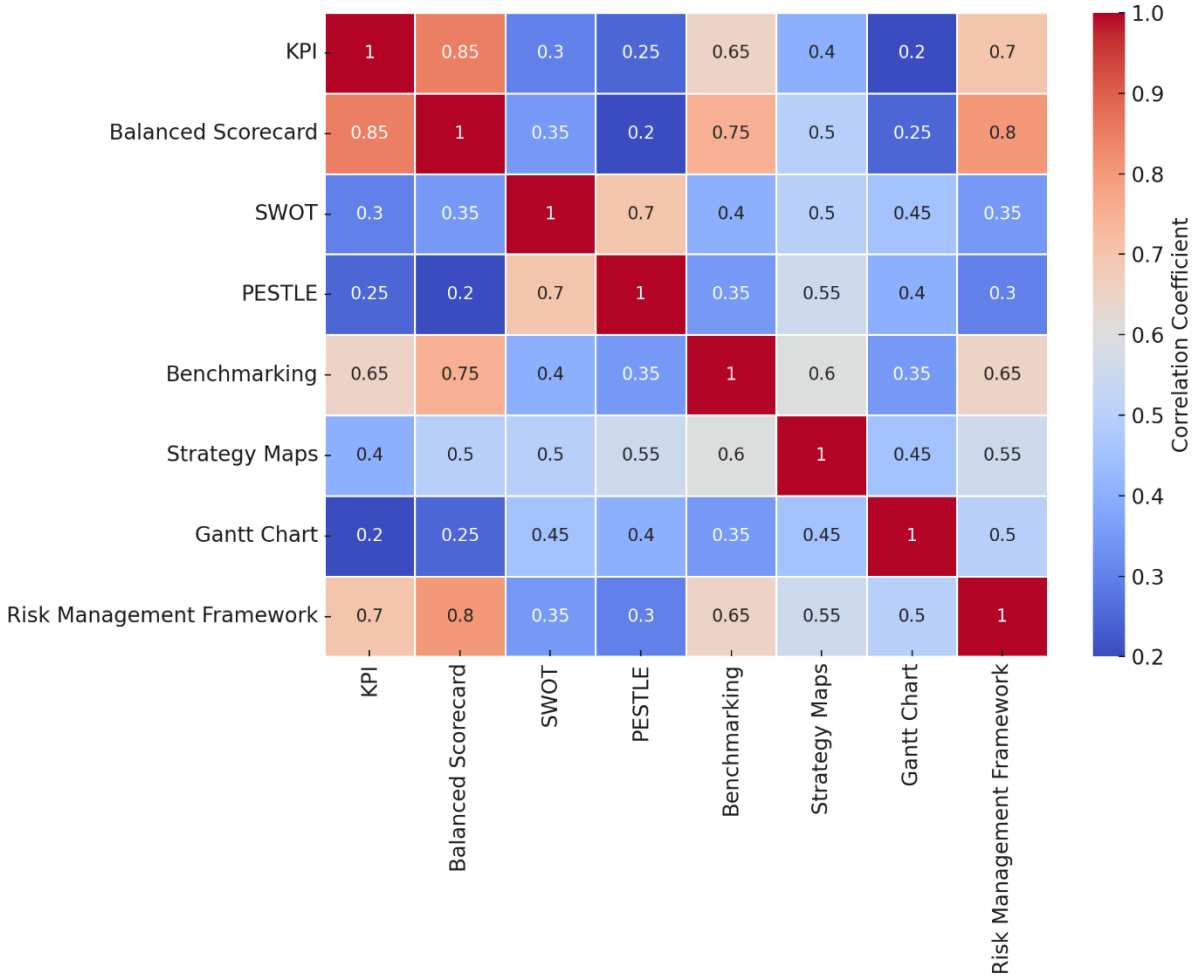
(Source: authors)[17]

The second cluster (Figure 2) includes tools that are more strongly preferred by one of the groups. For instance, Balanced Scorecard (BSC) and Lean Management are more widely used by managers, reflecting their application in practical business environments. The standard deviations indicate variability in preferences, while the PCA loadings confirm the importance of these tools in strategic management, particularly in contexts where efficiency and result orientation are crucial.

The correlation matrix (Figure 3) provides an overview of how different tools are interconnected and which tools are frequently used together. The results indicate that the use of the Balanced Scorecard is closely linked with effective performance measurement and tracking through KPI. The Balanced Scorecard helps organizations translate their strategic goals into specific KPIs, explaining this strong connection. Organizations that consistently apply the Balanced Scorecard also tend to have a well-developed risk management framework through the Risk Management Framework. This is likely due to the integration of strategy and risk management within overall strategic planning. Additionally, organizations using the Balanced Scorecard frequently employ benchmarking to compare their performance with competitors, enabling them to set realistic targets within the Balanced Scorecard.

Figure 3: Correlation matrix between used strategic tools

[17] The standard deviation varies for similarly important factors for managers in the range of 0,6 – 0,8 and for students in the range of 0,5 – 0,8. For factors more preferred by one group for managers 0,5 – 0,8 and for students 0,4 – 0,6.



(Source: authors)

Companies focusing on KPIs often integrate risk-related metrics into their key performance indicators, suggesting that performance and risk are managed in coordination. Furthermore, organizations conducting SWOT analysis frequently use PESTLE analysis to identify external factors, providing broader context for understanding external environmental influences, which then contributes to a deeper analysis within the SWOT framework.

Discussion

Based on the results of the conducted research, it is possible to proceed with answering the formulated research questions.

- RQ1: What are the main sets of data inputs from the business environment that managers use for strategy creation and management?

The research results show that managers emphasize macroeconomic factors (such as inflation, Gross Domestic Product (GDP), trends in the global and local economy, and unemployment), internal processes, and benchmarking. The T-test analysis reveals that factors like logistics process efficiency, production productivity, financial performance benchmarking, and inflation are key for managers. These findings suggest that managers rely on data that reflect not only the current state of their

organizations but also the broader economic environment. This is consistent with the literature highlighting the importance of data-driven decision-making in modern management (Davenport 2017).

Macroeconomic factors, such as trends in the global and local economy, GDP, and inflation, showed statistically significant differences between managers and students, indicating that managers more frequently integrate these indicators into their strategic analysis. This focus on macroeconomic indicators reflects the global nature of the modern business environment, where the ability to respond to changes in economic conditions is crucial for maintaining competitiveness (Porter 2008, 78-93).

- RQ2: What data should a company protect through CCI to defend its corporate strategy from CI activities of competing firms?

Based on the cluster analysis, it is evident that the key factors managers consider crucial include not only macroeconomic indicators but also data tied to the activities of specific competitive entities in the market. For this reason, companies need to protect sensitive information related to internal metrics that could be exploited by competitors to gain a competitive advantage. These factors are critical for maintaining competitiveness, and any leakage of such information could significantly damage a company's strategic position. The specific data that should be protected include: innovation in competitive products, financial performance benchmarking, productivity benchmarking, competitors' pricing strategies, and market share[18]. These are key areas that should be safeguarded. Protecting critical information is essential for maintaining a competitive advantage, and companies should invest in securing their information and in systems that can prevent industrial espionage (Fleisher, Bensoussan 2015).

- RQ3: What "modus operandi" in the form of applied strategic tools is most frequently used by managers for strategy creation and management?

The research shows that the most frequently used strategic tools include the Balanced Scorecard (BSC), Key Performance Indicators (KPI), and the Risk Management Framework. Statistical analysis revealed that managers assign significantly higher importance to these tools than students. This aligns with the literature, which emphasizes the importance of these tools for systematic performance management and risk management in organizations (Kaplan, Norton 2004; Beasley et al. 2015). These findings confirm that managers prefer comprehensive approaches to performance monitoring and management, which enables effective resource allocation and risk minimization. BSC and KPI are tools that allow managers to track organizational performance and link strategic goals with operational processes. The Risk Management Framework becomes especially crucial in an uncertain global environment where there is a need to quickly identify and respond to risks that could threaten an organization's strategic goals. The results support the idea that educational programs for managers should be adapted to reflect the differing needs and perceptions of both groups (Mintzberg 2009).

[18] Although market share can be determined accurately from secondary data, it is always an approximation and cannot substitute the precise values that competitors have at their disposal.

The study provided a detailed insight into the differences in the prioritization of strategic factors between managers and students, revealing key aspects of strategic thinking in the business environment. The findings align with those of similar studies. For example, research by Smith and Jones (2018, 456-478) emphasizes that managers tend to focus more on factors affecting overall economic stability and the company's competitiveness, which corresponds with our findings, where managers highly value macroeconomic indicators such as inflation and Gross Domestic Product (GDP). In contrast, students, as our study also shows, prefer factors related to direct competition and specific market conditions, reflecting their academic focus and limited practical experience.

Cluster analysis, based on PCA results, further revealed the existence of two dominant approaches to strategy. The first cluster included factors important to both groups, such as customer satisfaction and supplier delivery quality, confirming their universal importance for business strategy. The second cluster highlighted differences between the groups, where managers preferred broader macroeconomic indicators, while students focused on specific market factors. A similar pattern was found in the study by Johnson et al. (2020, 123-145), which observed that students, even those in practice, tend to focus on factors that could directly impact their future careers and market success, while managers prefer longer-term and more complex strategic views that emphasize comprehensive data collection for ensuring efficiency and competitive advantage (Lund et al. 2019, 89-103).

The research results also provide valuable insights into preferences for strategic tools (modus operandi). T-tests revealed statistically significant differences in the perceived importance of certain tools, with managers favouring tools critical for strategic management and risk management, such as the "Balanced Scorecard (BSC)" (t-statistic = 2.12, p-value = 0.037) and the "Risk Management Framework" (t-statistic = 2.94, p-value = 0.004). These differences are likely due to the varied experiences and professional orientations of the two groups. Managers, who are regularly engaged in strategic decision-making and risk minimization, naturally prefer tools that support these processes, while students, who are just entering the workforce, tend to lean towards tools focused on analysis and planning.

Cluster analysis divided the tools into two main groups. The first cluster includes tools such as "KPI," "Balanced Scorecard (BSC)," and "SMART Goals," which have similar popularity in both groups. The second cluster, however, contains tools that are preferred by either managers or students. For example, "SWOT analysis" and "PESTLE analysis" were more commonly used by students, while "Risk Management Framework" and "Business Process Reengineering (BPR)" were preferred by managers. This structure supports the hypothesis that managers focus on tools that support strategic and risk management, while students concentrate on analytical and planning techniques.

Correlation analysis also revealed significant connections between the use of various strategic tools in practice. For example, the "Balanced Scorecard" shows strong correlations with performance measurement (KPI), benchmarking, and risk management, suggesting that organizations using these tools integrate strategic management with performance metrics and risk factors. Similarly, "SWOT analysis" is closely linked with "PESTLE analysis", reflecting an integrated approach to analyzing internal and external factors, which is often applied in practice.

Our findings align with previous studies while further expanding the understanding of how different user groups evaluate and use strategic tools. Qehaja et al. (2017, 67-99) identified SWOT analysis, benchmarking, and PEST analysis as among the most commonly used tools globally, which matches our findings that these tools are highly preferred by students. Moreover, Wright, Paroutie, and Blettner (2013) emphasized the importance of tools like Porter's Five Forces and generic strategies, which align with managers' preferences for tools supporting strategic decision-making. On the other hand, Rigby and Bilodeau (2015) pointed out the potential volatility in the use of these tools depending on economic conditions, which is important to consider when interpreting our results. Compared to domestic studies, such as those by Suchánek (2013, 89) and Afonina and Chalupský (2012), our results also show that tools like benchmarking, "Balanced Scorecard", and "Business Process Reengineering" remain highly relevant among managers, while SWOT analysis and PEST analysis maintain popularity among the broader population, including students. In this way, our study contributes to a deeper understanding of the dynamics of strategic tool usage, particularly in the context of education and professional practice.

Recommendations for Practice

Based on the obtained results, a set of practice recommendations can be made. Managers should create flexible strategies that can quickly adapt to changes in the external environment, which includes regularly reassessing strategic goals and adapting to market, economic, or technological changes. The research indicates that monitoring macroeconomic indicators helps organizations better face challenges and seize opportunities in turbulent environments. Scenario analysis and the preparation of alternative plans are key for responding quickly to unforeseen events.

Adaptive management based on real-time data allows organizations to manage their operations flexibly. The results show that managers often use data to optimize strategies, confirming the importance of rapid responses to current conditions. Implementing systems for real-time data collection and analysis, such as Business Intelligence tools, facilitates quick decision-making and operational adjustments.

Managers often use CI for benchmarking and analyzing market conditions, enabling a quick response to changing market dynamics. Introducing structured processes for collecting and analyzing competitive information, including regular reports and benchmarking, helps better understand competitive pressures and identify new opportunities. The research shows that many managers monitor competitive intelligence, highlighting the need to protect information from leaks. Strict policies and procedures, such as encryption, access control, and cybersecurity training, should be implemented to protect against cyber threats.

Preparedness for crises is key to successful crisis management. Organizations should create and test crisis plans and simulate unforeseen events. The research shows that organizations prefer flexible and iterative approaches, similar to military planning, which emphasizes rapid response and preparedness for changes.

Building team adaptability and resilience is essential for handling challenging situations. The research highlights the importance of the feasibility and acceptability of strategies, indicating that teams should

be well-prepared for changes. Investment in training focused on adaptive leadership and creative problem-solving fosters a culture where mistakes are seen as opportunities for learning and improvement.

Inspiration from Military Approach to Developing a Strategy

In terms of recommendations from military strategy for application in business management, the following can be proposed. KPIs are one of the most frequently used tools according to the research. In the military, key performance indicators (e.g., the efficiency of logistics operations, response speed, weapon accuracy, and effectiveness) are used to monitor and improve military operations. These metrics help the command monitor whether strategic goals are being achieved. It can be stated that KPIs in business and military metrics (in line with Hedley's findings, 2010) show a strong parallel, as both serve to monitor performance and efficiency relative to strategic goals[19]. Recommendations for business practice can also draw on the After Action Review (AAR) method, which offers a potentially suitable application for strategic business management. This process involves reflecting on what went well, what went poorly, and how future operations can be improved (Darling, Parry, Moore 2005). AAR can be adapted to the business environment as a method for post-project reviews or lessons learned. It allows teams to evaluate projects and initiatives, identify successes and failures, and take measures to improve future projects.

Operation planning in the military involves balancing various aspects - logistics, force deployment, resource management, and more. All of this must be aligned for operational success. Similarly, the Balanced Scorecard in business balances various aspects of the business (finance, internal processes, customers) to ensure strategy effectiveness at all levels of the organization (Søilen 2020). Both approaches aim to achieve balance across different aspects of the organization to ensure an effective and successful strategy. Valuable inspiration from military strategy can be found in Mission Command, which emphasizes decentralized decision-making, where commanders at all levels have clearly defined goals but flexibility in how to achieve them. This approach can be applied in business as decentralized management or empowerment, where employees at various

[19] KPIs in military contexts focus on objectives such as mission success, personnel safety, and the effective use of resources in high-stakes environments. These performance indicators are not only vital for assessing mission success but also for maintaining the safety and well-being of personnel, emphasizing the protection of human resources as a top priority. In contrast, business KPIs are generally oriented toward maximizing profitability, achieving sustained market growth, enhancing customer satisfaction, and optimizing internal processes. This focus aligns with the overarching business goal of creating long-term value and competitiveness in a rapidly evolving marketplace. The fundamental divergence in how performance and success are measured between military and business contexts lies in the prioritization of outcomes. Military strategies require an acute awareness of risks, resource allocation, and the immediate consequences of decisions, as failure could result in the loss of life and mission failure. Therefore, military KPIs often integrate considerations of resilience, adaptability, and the ability to operate under adverse conditions. While certain principles, such as resource optimization and risk management, can be adapted, the metrics themselves often require significant adjustment to reflect the different objectives and environments of each domain. Consequently, a nuanced understanding of both military and business KPIs is essential for effectively leveraging insights from one field to benefit the other, while acknowledging the inherent differences in how performance is evaluated and prioritized.

levels are responsible for achieving goals derived from strategic objectives and are encouraged to take initiative and innovate within clearly defined frameworks (Sinek 2014).

In both military and business environments, thorough risk analysis and management are key to the success of a strategy or operation[20]. Military risk management, similar to business risk management, involves identifying potential threats and mitigating them. In the military, Operational Risk Management is a key part of mission planning, crucial for protecting soldiers and ensuring mission success. This process includes identifying risks, assessing them, and implementing measures to reduce risks to an acceptable level. In business, the Risk Management Framework is used to identify and manage risks associated with strategy (Prince 1998, 15-24). Both methods focus on minimizing risks and ensuring the success of a strategy or operation through thorough planning and monitoring.

As part of risk management strategies, the military employs various tools to analyze and prepare for potential challenges. One such tool is wargaming, used to simulate different war scenarios and anticipate possible battlefield developments. This method allows for testing strategic plans and evaluating their potential consequences. Concerning Scenario Planning, both methods focus on anticipating future events and preparing for various scenarios, which is key to success in both combat and business (Schwarz 2013, 5-19). While both scenario planning and wargaming are used to anticipate future uncertainties, their applications at the same time differ significantly. Scenario planning is a broader approach used across sectors to explore a range of possible futures, including economic, technological, and social changes. Wargaming, however, is rooted in military strategy, simulating adversarial scenarios to test strategic responses and adaptability. The implications of these differences are profound, as wargaming tends to prepare organizations for conflict and opposition, whereas scenario planning aids in general future preparedness. West et al. (2018) specifically suggest how the application of wargames can help reveal internal leadership capabilities and counter external threats through strategic actions.

Course of Action Analysis (COA) is used in military strategy to evaluate different options (strengths and weaknesses of each action) against the enemy, with the goal of selecting the best possible option that minimizes risks and maximizes the chance of success. Similar to SWOT analysis, both methods serve to analyze internal and external factors that may affect the success of a strategy (Khalid Alrashedi, 2023). COA Analysis can be adapted for strategic decision-making in business, especially when choosing between different strategic initiatives, such as new investments, international expansion, or company reorganization (although practical application of COA can be highly resource-intensive and time-consuming, its robustness balances many of the shortcomings

[20] Both military and business environments operate under conditions of uncertainty, but the nature of risks they face differs significantly. Military risk management is heavily data-driven, involving threat assessments and the continuous evaluation of operational risks (Chylík, Procházka, 2020, 3-24) including the application of system dynamics (Drmola, 2014, 15-28). Key metrics include the accuracy of risk assessments, the effectiveness of contingency plans, and the resilience of strategic operations. In comparison, business risk management often deals with market risks, financial uncertainties, and operational disruptions. This comparison reveals opportunities for businesses to adopt more robust, proactive risk management practices inspired by military methodologies, particularly in high-stakes or rapidly changing markets (Smejkal, Rais, 2013).

of a traditional SWOT application). This process may involve detailed analysis of the costs and benefits, risks, and expected outcomes for each option (Hedley in Gibson 2010, 85-93).

In strategic decision-making, it is crucial to recognize that different options often necessitate distinct approaches, and there is rarely a definitive “best” solution. This reality reflects the inherent complexity of evaluating multiple courses of action, each with its own set of advantages and limitations. Factors such as the specific context, available resources, risk tolerance, and the dynamic nature of external environments all influence the appropriateness of a given strategy. As a result, decision-makers must adopt a flexible and adaptive mindset, prepared to analyze, test, and adjust their strategies as new information becomes available. The lack of a clear, universally optimal path highlights the importance of iterative assessment and strategic agility, allowing organizations to refine their approaches in response to evolving circumstances. This adaptive approach is essential for maintaining effectiveness and resilience in both military and business environments, where the landscape can shift rapidly and unpredictably.

Conclusion

This study provides a nuanced examination of the strategic tools and methodologies used by managers and practicing students, drawing key insights from the intersection of military and business strategy. By comparing the approaches of experienced managers and emerging young professionals, we highlight critical differences in how these groups prioritize data and apply strategic frameworks. These differences underscore the varying strategic priorities and decision-making processes shaped by professional maturity and industry demands.

This research contributes to the broader discourse on the applicability of military strategies in business contexts, emphasizing the need for adaptive and evidence-based strategic management practices. While there are valuable parallels between military and business strategies—such as the emphasis on data-driven decision-making and risk management—significant distinctions remain. While the analogy between business and military strategies provides valuable insights, it is important to acknowled ge that managerial decision-making in the business context is influenced by a wide range of factors, including industry-specific requirements, organizational culture, and situational context. Managers often have the flexibility to adopt various methods and innovative practices, tailored to the unique challenges they face. In contrast, military commanders operate within hierarchical structures and must adhere to orders from their superiors, reflecting a fundamental difference in strategic autonomy and approach.

Our findings are contextually grounded in the experiences of leading Czech managers and practicing students from Newton University in accordance with Wright (2013, 92-125) recommendation. As such, the conclusions drawn from this research should be interpreted with an understanding of these specific settings (as noted in the research methodology). The strategic preferences and practices observed in our study may not be directly generalizable to other groups or sectors, as variations can occur based on industry dynamics, organizational structures, and individual roles. By grounding our conclusions firmly within the scope of the collected data, we provide a focused and relevant analysis that invites further exploration (based on the presented findings) into the dynamic and

multifaceted nature of strategic decision-making to explore how strategic approaches might differ across diverse environments.

The overall contribution of the study lies in connecting theoretical approaches with practical applications, which is crucial for the effective creation and management of strategy in today's increasingly complex business environment. The article's contributions include not only identifying the data collected by business entities from the business environment and the most commonly used modus operandi but also highlighting the differences and similarities in strategic management approaches between various groups of managers. It also suggests how these insights can be applied in the development of educational and training programs inspired by military approaches. This study paves the way for further research that could explore in more detail how different military and business approach to management influence the long-term success of companies and how these approaches can be integrated into a unified strategic framework to ensure effective and adaptive management across various business contexts. Such integration could lead to more robust and adaptable strategies capable of addressing both internal challenges and external changes in global and local environments.

Appendix 1: PCA Loadings of Factors on Principal Components (Data)

Factor	*PC1 Loading*	*PC2 Loading*	*PC3 Loading*	*PC4 Loading*	*PC5 Loading*
Customer satisfaction (from surveys)	0.45	0.32	0.12	0.22	0.09
Supplier delivery quality	0.42	0.28	0.18	0.20	0.11
Supplier reliability	0.40	0.24	0.17	0.19	0.12
Productivity benchmarking	0.38	0.27	0.19	0.14	0.09
Logistics process efficiency	0.47	0.30	0.15	0.16	0.08
Innovation in competitive products	0.44	0.28	0.13	0.21	0.12
Production productivity	0.51	0.25	0.12	0.17	0.09
Financial performance benchmarking	0.43	0.26	0.13	0.14	0.08
New market exploration	0.37	0.22	0.19	0.18	0.12
Monitoring regulatory changes	0.35	0.20	0.15	0.17	0.11
Raw material costs	0.34	0.18	0.14	0.15	0.10
Geopolitical risk analysis	0.29	0.16	0.13	0.14	0.09
Global economic trends	0.60	0.35	0.10	0.19	0.14
Local economic trends	0.52	0.32	0.14	0.20	0.11
Inflation	0.54	0.30	0.12	0.18	0.10
Gross Domestic Product (GDP)	0.50	0.28	0.13	0.16	0.09
Unemployment	0.42	0.22	0.12	0.14	0.07
Competitors' market share	0.39	0.20	0.14	0.12	0.08
Competitors' pricing strategies	0.37	0.18	0.13	0.11	0.07
Economic indicators of key partners	0.30	0.16	0.11	0.10	0.06

(Source: authors)

Appendix 2: PCA Loadings of Factors on Principal Components (Strategic Tools)

Tool/Method	*PC1 Loading*	*PC2 Loading*	*PC3 Loading*	*PC4 Loading*	*PC5 Loading*
Balanced Scorecard (BSC)	0.56	0.23	0.12	0.18	0.09
KPI (Key Performance Indicators)	0.60	0.22	0.15	0.13	0.07
SWOT Analysis	0.50	0.21	0.17	0.19	0.12
PESTLE Analysis	0.43	0.27	0.13	0.20	0.11
Porter's Five Forces	0.38	0.31	0.16	0.12	0.08
Business Process Reengineering (BPR)	0.41	0.26	0.15	0.14	0.09
Benchmarking	0.52	0.20	0.19	0.10	0.07
Strategy Maps	0.45	0.24	0.14	0.18	0.09
Lean Management	0.48	0.21	0.16	0.17	0.10
Six Sigma	0.36	0.28	0.14	0.11	0.08
Cost-Benefit Analysis	0.34	0.25	0.12	0.16	0.09
Risk Management Framework	0.55	0.19	0.17	0.13	0.10
Stakeholder Analysis	0.49	0.23	0.15	0.12	0.11
SMART Goals	0.58	0.18	0.13	0.14	0.09
Scenario Planning	0.46	0.29	0.14	0.11	0.08
Okun's Law	0.32	0.17	0.11	0.15	0.07
Gantt Chart	0.47	0.22	0.16	0.14	0.09
Balanced Scorecard Dashboard	0.44	0.25	0.13	0.17	0.08
Total Quality Management (TQM)	0.39	0.24	0.14	0.16	0.10
Root Cause Analysis (RCA)	0.35	0.19	0.12	0.13	0.08

(Source: authors)

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