“Exploring project team motivation: A systematic and bibliometric analysis”

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EXPLORING PROJECT TEAM MOTIVATION: A SYSTEMATIC AND BIBLIOMETRIC ANALYSIS

Abstract

The purpose of this study was to summarize the motivational factors in a project team, focusing on three key roles: team members, project managers, and project leaders. A systematic review was conducted using the PRISMA approach to identify relevant studies published between 2004 and 2024. 127 peer-reviewed articles were selected from the Web of Science database. The bibliometric analysis was performed using VOSviewer software to visualize trends and clusters. The bibliometric analysis revealed a surge in interest in research after 2021, highlighting the motivation's special role in project management. Transformational and shared leadership are identified as the most motivating in projects. The study identified seven main categories of motivational factors in the project team: psychological factors, goal orientation, social factors, job design, training and development, financial incentives, and organizational support. However, these categories have their characteristics, emphasizing that motivation is not a universal concept but a dynamic and role-dependent construct. While team members are motivated by emotional support, clear goals, and rewards, project managers value strategic influence and professional development, and project leaders are driven by task complexity and intrinsic rewards. The noticeable gap in the research was the lack of attention to the motivation of the project leader. These findings offer a structured framework for improving team motivation and project performance across various organizational contexts.

Keywords project management, motivation, leadership styles, team members, project manager, project leader

JEL Classification M12, M54, O15, L29, J29

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INTRODUCTION

Project work combines individuals from several departments, disciplines, and companies to accomplish a shared goal – producing something worthwhile for the investor company. Leading a group of people to become a high-performing team is skilled work; some would argue that it is the most important skill a project professional needs to develop.

Temporary teams in projects should come together and do their work quickly. These teams are becoming increasingly international, with different skills and perspectives, and may be located in other countries and continents (APM, 2019). The ability of people to work together and the desire to fully invest are the goals of managers. For teams to work effectively and achieve their goals within the framework of the project triplet, high motivation of its members is needed. Zwerenz (2019) notes that motivation in project management is a central factor in forming a competent project team and successfully implementing the project. Strong team motivation positively influences the relationship between abilities and project effectiveness (Dasi et al., 2021). Motivation is crucial for improving the effectiveness of knowledge transfer (Khoza & Bwalya, 2021; Teng & Pedrycz, 2022).

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Project teams have several key roles, each performing unique functions. Accordingly, the motivation factors for each participant will be different since their responsibilities, expectations, and incentives do not match. To date, many studies have been conducted on the motivation factors of the project team, which are scattered across disciplines and industries. Some studies focus on task complexity and autonomy factors, while others explore cultural and generational differences within the project team. The division of motivational factors into roles in the project team will make it possible to create precise motivation strategies, considering each role's unique responsibilities. However, no comprehensive framework combines these factors for each role. Additionally, although leadership plays a crucial role in increasing motivation, there is limited research on which leadership styles are currently most effective. Changing organizational conditions, such as the proliferation of agile methodologies, multicultural teams, and remote work environments, require a deeper understanding of how traditional and new factors influence motivation.

1. LITERATURE REVIEW

In the domains of organization and project management, motivation in project teams is a significant study issue. Over the past decades, various theories and frameworks have been proposed to understand and enhance team motivation in diverse project settings. Motivation theories are the basis for understanding team dynamics in projects. Classical theories such as Maslow's hierarchy of needs and Herzberg's two-factor theory have been extended to the project team context to explain how internal and external motivating factors influence the engagement of team members. More modern approaches, such as the theory of self-determination (SDT), show that human behavior is interconnected with motivation for growth and change. This explains the three primary internal psychological needs for behavior change: the need for competence, the need for autonomy, and the need to establish relationships. It also holds that the higher the level of responsibility, the more important autonomy and self-realization are. In addition to general theories of motivation, the use of concepts in project management has been explored. For example, job design can influence organizational performance. The idea proposed by Hackman and Oldham (1976) in their Job Characteristics Model was adapted to highlight the importance of tasks, autonomy, and feedback as motivating factors. It shows that various degrees of effort call for varied strategies of inspiration. Leadership theories (Gardner et al., 2005) show that leaders are motivated differently, as their role involves inspiration, not just coordination. These theories and frameworks confirm the need to differentiate motivational factors by role. Based on these differences, motivational strategies must be suitably modified.

Motivation affects the creativity of employees, and effective methods include management's trust in employees, the ability to listen to their ideas, joint team-building activities, and concern for the physical health of employees (Huzar et al., 2023). Investigating motivation and engagement in projects via cluster analysis, Abbud et al. (2021) concluded that project motivation is closely related to professional development and growth, with an increased interest in sustainable development and stakeholder relationships. Aliu et al. (2023) in bibliometric analysis emphasize the need to adapt traditional project management methods to modern requirements, emphasizing the importance of motivating teams to achieve project success. Bibliometric research and systematic reviews provide valuable insights into the evolution and current state of the field.

Baldé et al. (2018) demonstrate the importance of trust in a team and internal motivation as a factor influencing the formation of knowledge and creativity of individual employees. Teng and Pedrycz (2022) also point out the crucial importance of motivation for improving the effectiveness of knowledge transfer. Motivation in project teams is a multifaceted structure influenced by various psychological, organizational, and leadership factors.

The literature shows that motivation factors vary depending on the industry, culture, and type of project. Recent research has mainly focused on motivation to study in educational institutions (Christidis et al., 2025; Farrokhnia et al., 2025). Most of the research has been conducted in the IT and construction sectors. Task complexity, lead-

ership communication, and trust were studied as motivation factors in construction projects. Much research has been conducted in IT projects using agile methodologies and their connection with the high motivation of project participants. Other studies focus on team composition and its effect on motivation levels. For example, Yildirim and Korkmaz (2017) confirm that Millennials are often motivated by project scope and value. The motivation is very diverse, and therefore, many points of view need to be considered and explored in different countries (Al-Abbadi & Agyekum-Mensah, 2022). Cultural differences and generation also influence the importance of certain motivational factors. This is probably due to different cultural values, especially the difference in power, the principle of seniority, and collectivism (Hitka et al., 2019). Hitka et al. (2018) identified differences in motivation factors among Slovak employees related to gender and education. In addition, cross-cultural ties can motivate employees who want to work in a multicultural environment (Lifintsev & Canavilhas, 2017).

Altaher et al. (2024) emphasize the role of leadership in inspiring and uniting team members. Similarly, elements such as psychological safety, effective communication (Marder et al., 2021), and shared leadership (Mayer et al., 2023) have been identified as critical drivers that enable team members to take the initiative, collaborate, and achieve their objectives.

Ferreira and Nobre (2022) showed that the advantages of using agile project management are communication, time savings, increased efficiency, autonomy, and motivation. According to Rietze and Zacher (2023), retrospective meetings, feedback in daily stand-up meetings, self-organized decision-making due to high levels of responsibility and communication, positive customer feedback and appreciation, and visualization of work progress as goal clarity are positively related to the team's motivation. Several reviews have been performed to understand the motivation and performance effects of the project members (Grant & Shandell, 2022; Suárez & Vizcaíno, 2024).

The literature review shows that many studies have been conducted on motivation in project activities. However, there are no studies summarizing the various factors that influence the project team's motivation and how these factors differ depending on the project's role. Summarizing the results of previous studies, this study aims to provide a systematic and updated look at motivation factors, laying the foundation for determining appropriate strategies to increase the project team's effectiveness. It seeks to identify key motivating factors for project roles and leadership styles and offers a structured framework applicable in various industries. The results obtained will serve as a comprehensive basis for advancing research and practice in the field of project team management so that organizations can create highly effective teams in which all participants are motivated.

2. METHOD

This study used a systematic and bibliometric approach to analyze the factors and leadership styles influencing project management motivation. The methodology was developed to ensure a comprehensive study of peer-reviewed articles, with a special emphasis on identifying factors related to motivation in the project environment for the project manager, leader, and team member.

The Web of Science database was chosen due to its wide coverage of high-quality peer-reviewed articles and strict indexing standards that ensure the reliability of the sources included in this study. The PRISMA approach was used during the research to select a list of suitable articles. The following combination of keywords and query syntax was used in the Web of Science database to search for the necessary literature: "project management" AND (motivation OR leadership) AND team (All Fields). The following filters have been installed:

- publication years: From 2004 to 2024;
- document types: Article;
- Web of Science categories: Management or Business or Economics;
- languages: English.
- articles refined: Review articles and book chapters, not document types.

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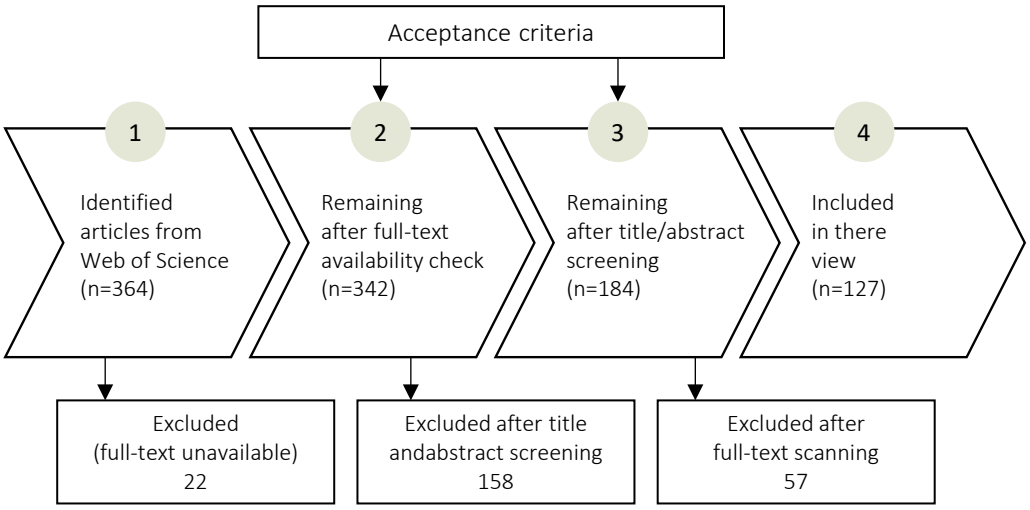

Figure 1. The search and selection process

The final selection of articles was done on October 30, 2024. Thus, 364 results from the Web of Science Core Collection were identified, and 22 articles were excluded because of the absence of full text. The remaining 342 articles were screened based on title and abstract. Next, 158 articles were excluded. After scanning the full texts of 184 articles, another 57 articles were excluded. Finally, 127 articles were included in the review. Figure 1 summarizes the search and selection process. Table 1 provides the inclusion and exclusion criteria.

The following information was extracted from each article: author(s), title, journal, year of publication, knowledge type, research method, context, sample size, key argument(s), key quotes, project participant, factors influencing motivation, theory/concepts, key problems, and demotivators, GAP for future research. A thematic analysis approach was applied to identify the main themes and subtopics based on the data obtained. The results of the thematic analysis were summarized to provide an overview of the current state of knowledge about the motivation of project members.

This study used a combination of bibliometric and systematic approaches to gain a comprehensive understanding of the motivating factors of project teams.

A bibliometric analysis aims to quantitatively study the scientific landscape to identify the main trends, key clusters, and knowledge structures. VOSViewer software was used for the bibliometric analysis. This software allows for the visualization of the relationships between publications, authors, and keywords in scientific literature. As a result, the analysis retrieved the number of citations and publications over a specific period, the number of publications by country, a map of the analysis of joint citations, keyword matches, and a breakdown by category.

A systematic literature analysis made it possible to study the content of publications, their methodological approaches, and empirical results in detail. The systematic analysis was carried out using a variety of research methods. Initially, all articles were analyzed using content analysis, and the main factors of motivation and leadership styles were identified; then, these factors were categorized using the method of generalization and classification. Comparative analysis identified gaps in the study and differences in the motivational factors of the project team members under consideration.

Table 1. The acceptance criteria

No.	Inclusion criteria	Exclusion criteria
1	Scientific peer-reviewed article	Books, book sections, reviews, conference materials
2	Articles exploring team motivation in project management	Articles exploring motivation in an organization, not in a project
3	The presence of explicit discussions related to motivation or its influencing factors	Articles exploring student motivation related to the learning process

These methods complemented each other. The bibliometric analysis provided an overall picture of the research field, and the systematic review allowed a better understanding of the content of key works and identified thematic gaps. The Web of Science Database was chosen as the source due to its breadth of coverage and high-quality indexing of scientific publications.

3. RESULTS AND DISCUSSION

According to the Web of Science, with keywords "project management" AND (motivation OR leadership) AND team, 364 English-language scientific articles were published from 2004 to 2024 (as of October). As seen in Figure 2, scientific publications in this field have seen a noticeable increase. From 2004 to 2020, growth was observed with jumps; a sharp increase in research interest in this topic began in 2021 and continues to remain high.

The number of citations during this period also tends to increase, with steady growth from 2006 to 2016. Since 2017, there has been a significant increase in citations, and the upward trend continues. Analyzing the number of publications and citations shows that the scientific community is increasingly interested in studying motivation in project activities.

The research was conducted in 59 countries, covering all continents, showing the importance of studying motivation in project management. Figure 3 shows the countries with the most significant number of studies. The most extensive studies were conducted in the USA, Australia, and China. Studies have been also conducted in Brazil, South Africa, Taiwan, and Pakistan, along with European countries. This analysis shows a lack of research from Central Asian countries. If one considers the influence of culture on motivation, then research in these countries is necessary. Many studies also indicate that future research should cover different cultures (Haffer et al., 2021; Tkachenko & Ardichvili, 2020).

VOSViewer software was used to determine the most cited works and the relationship of citations. The co-citation analysis contains 13,241 authors, of which 105 meet the threshold value, assuming 20 minimum of citations. This analysis revealed four separate clusters within the collaborative citation network (Figure 4). Cluster 1, highlighted in red, contains 36 authors, where the key ones are Muller, R., Turner, Jr., and Pinto, J. K. The second cluster, highlighted in green, contains 34 results, and Hoegl, M., Pearce, Cl., and Avolio, Bj. are the primary authors. The third cluster includes 31 authors highlighted in blue, including the widely cit-

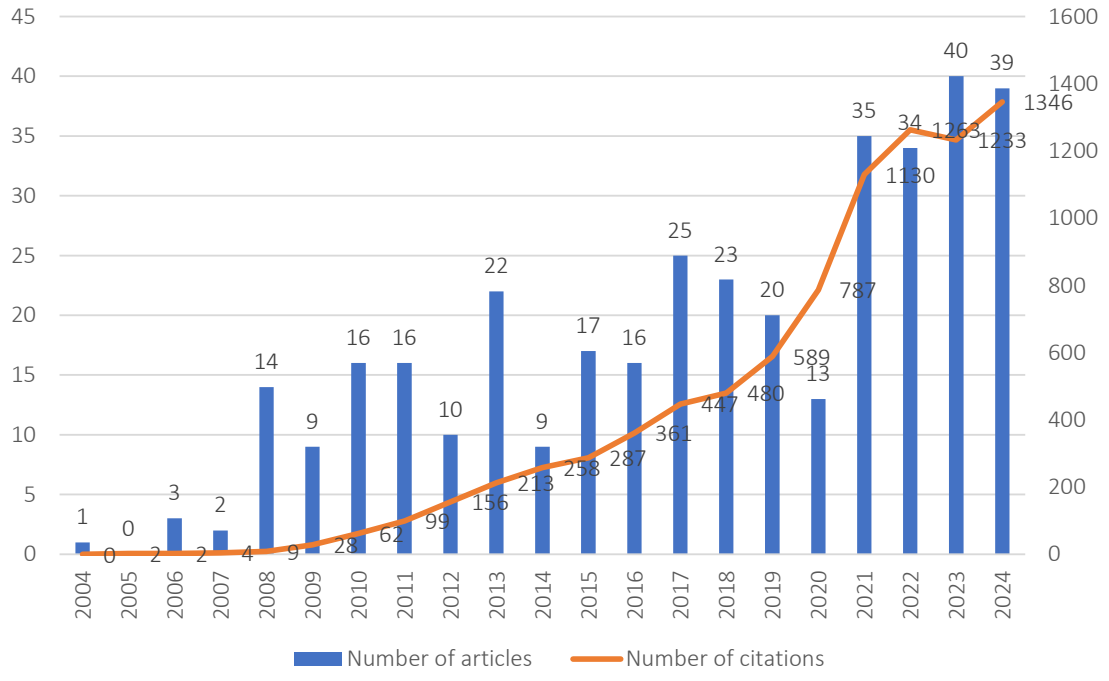

Figure 2. Publications and the number of citations over time

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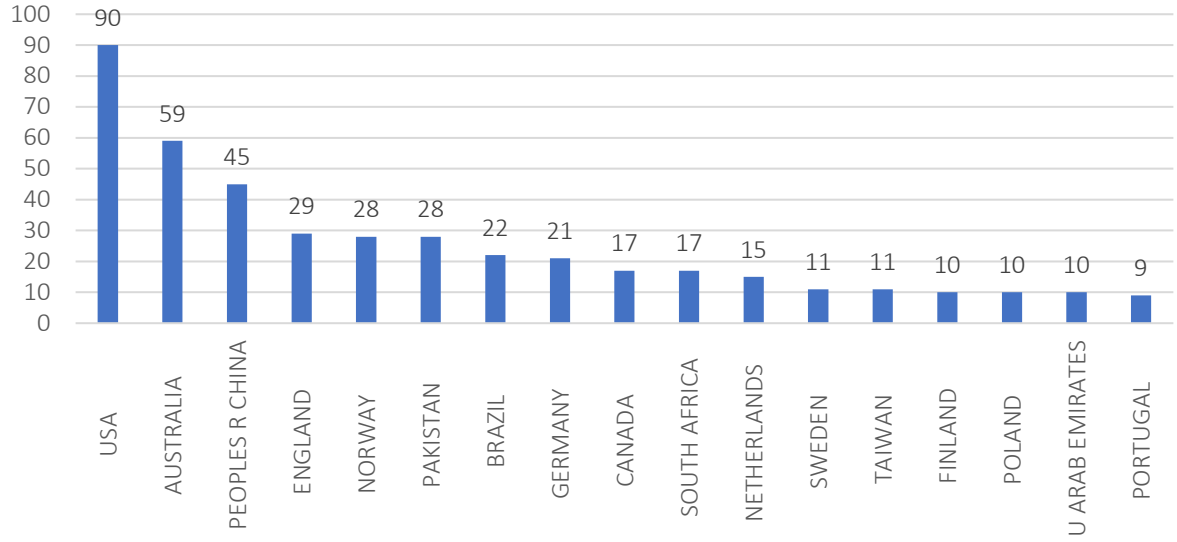

Figure 3. Number of publications by country

ed Podsakoff, Pm., Bass, Bm., Hair, Jf. The fourth cluster contains Clarke, N., Mayer, J. D., Rezvani, A., Zhang, and Ly, highlighted in yellow. The co-citation analysis indicates the interest of a more significant number of scientists in this topic.

Highlighting related keywords in databases makes it possible to study a topic in detail, identify significant clusters, and reveal their research context. Figure 5 shows the match ratings for author keywords.

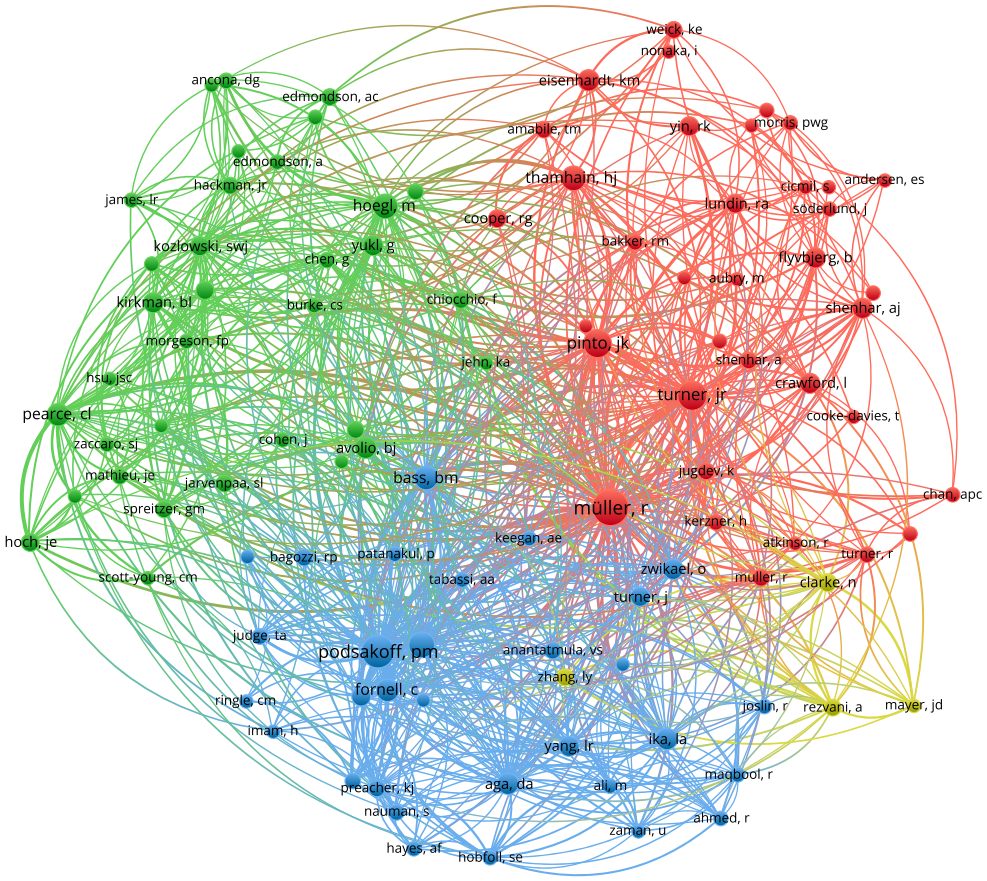

Figure 4. Co-citation analysis map with a minimum of 20 research articles

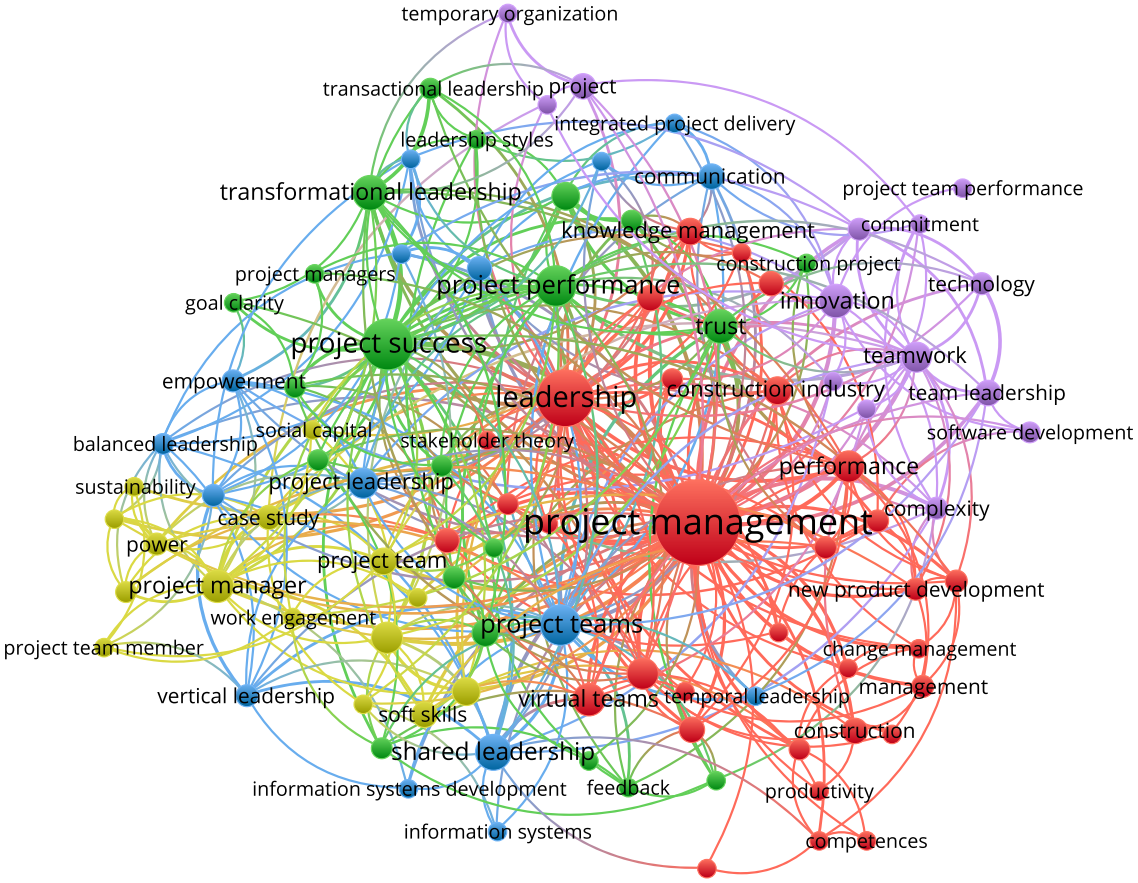

Figure 5. Co-occurrence by author keywords based on Web of Science

Figure 5 shows a network of co-occurrence keywords indicated by the authors of the articles. The graph contains five clusters, each highlighted with its color and theme. The central nodes, such as project management, leadership, project success, and project performance, are larger, indicating their central importance in research. The red cluster is the central and densest, which underlines its importance in project management and contains the following keywords: project management, leadership, performance, and motivation. Motivation creates a network with the words project management, leadership, project and team performance, project team members, productivity, goal clarity, and power. Project success is the central node in the green cluster and builds a link with the following keywords: project performance, transformational leadership, trust, emotional intelligence, and project managers. In the purple cluster, the keywords are innovation, teamwork, team leadership, technology, and project. In the blue cluster, project teams form the primary node, followed by different leadership styles: shared leadership, balanced leadership, vertical leadership, horizontal leadership, and temporal leadership. The project manager, project team, knowledge sharing, and organizational culture form the fifth yellow cluster. Figure 5 demonstrates the centrality of project management, leadership, and productivity, as well as the role of motivation, innovation, and various leadership styles in the success of projects. Each cluster highlights unique aspects that affect the effectiveness and collaboration of project activities. This analysis confirms that motivation plays a central role in project management and is associated with important aspects such as leadership, productivity, clarity of goal, and power.

The bibliometric analysis was based on 364 articles from the Web of Science database. The following is an analysis of the selected 127 articles in the study. In addition to the bibliometric information, the systematic review highlights key motivating factors for various project roles. The analysis identified key motivation factors for project teams, managers, and leaders. While team members pre-

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fer emotional support and clear goals, managers are guided by influence and strategic planning. In comparison, leaders emphasize complexity and cognitive diversity.

The analysis of research methodologies highlights the diverse approaches employed across studies, reflecting the complexity and multidimensionality of research practices. While theoretical research accounts for 14 cases, empirical methods dominate the field, showcasing a preference for data-driven approaches. Below is a detailed breakdown of the key methodologies and their usage frequency:

- theoretical research: Conducted on 14 cases, and most of the studies use empirical methods;
- case study: Occured 14 times;
- survey and questionnaire: Remained the most popular, with 66 mentions. The average number of respondents is 258;
- interview: Used in 11 studies. The average number of respondents is 15;
- mixed methods: Mentioned 11 times;
- other methods: Indicated a variety of approaches.

Surveys and questionnaires are the most popular methodologies, with less use of mixed and qualitative methods. Mixed methods are used to combine qualitative and quantitative approaches. Examples of contexts of mixed methods:

- combined survey and interview: 185 respondents and 13 leaders (Badrinarayanan, 2024);
- multilevel approaches: Hypotheses were tested on 59 project managers and 529 team members (Ren et al., 2024);
- case study and observation: Collecting qualitative data through interviews and focus groups (Swain & Lightfoot, 2016);
- combination of models and tools: Adaptation of the team performance assessment model for surveys and interviews (Randeree & Ninan, 2011).

Mixed methods cover various approaches, from surveys to interviews and observations. Interviews are most often used for in-depth analysis, especially in qualitative research. Multilevel and combined approaches are key for a comprehensive project environment analysis.

The most popular areas of research are construction, IT, and software. The research covers construction projects in different countries (China, Norway, Pakistan, and Australia). Special attention is paid to significant infrastructure projects and construction in times of crisis (for example, during the COVID-19 pandemic). The research covers IT team management, outsourcing, software development, and virtual teams. Innovative approaches to knowledge management in IT projects are often mentioned. Research in these areas covers local and global contexts, including multicultural teams, crisis management, and innovation.

Pakistan is the leader in the number of mentions in the context of research. The primary focus is construction, IT, telecommunications, and vocational training projects. Major infrastructure projects such as the China-Pakistan Economic Corridor (CPEC) (Zaman et al., 2021) and software and project teams in the IT sector are being investigated. China ranks second in terms of the number of mentions. Main research areas include construction, engineering projects, Lean Six Sigma, chemical industry projects, high-tech and infrastructure projects. Special attention is paid to projects related to COVID-19 and government initiatives (Ren et al., 2024). Australia ranks third in terms of population. The study focuses on leadership styles, virtual teams, construction projects, and project management in the public sector. Agile in project management is also being studied (Malik et al., 2021). Research in Germany covers cultural projects, virtual teams, and agility in innovation projects (Lil & Wald, 2021). Special attention is paid to leadership in the construction industry.

The chosen leadership style has a significant impact on the motivation of the project team. The literature review revealed different leadership styles, with transformational leadership being

mentioned the most often. Table 2 shows the most frequently mentioned leadership styles. The following leadership styles are also found in the research: Action-centered project leadership, boundary-spanning leadership, sustainable leadership, spiritual leadership, delegated leadership, authentic leadership, responsible leadership, servant leadership, and leader humility.

Modern approaches to leadership, such as transformational leadership and empowering leadership, are critically important. Leadership becomes the primary motivation catalyst, combining trust, autonomy, and a shared vision. These results are consistent with Dasi et al. (2021), who noted that teams with strong support and empowered leaders increase intrinsic motivation, allowing employees to be independent, and this indicates the most appropriate application of these leadership styles to form a motivated project team.

Table 3 shows the main factors influencing the project team's motivation in the work of scientists. Other studies have also mentioned the influence of entrepreneurial self-efficacy, prosocial motivation, social responsibility, responsibility, prevention focus, reflective practice, empowerment and referent power, empowerment, empowerment team, stimulate enthusiasm, and excitement. These factors emphasize the importance of combining personal motivation, leadership, team dynamics, organizational support, and clarity of goals. These aspects contribute to the effectiveness of completing tasks and improving the overall satisfaction and engagement of the project team members.

Table 4 shows the various motivation factors that affect a project manager's effectiveness. It highlights key topics such as psychological and value factors, goal achievement, social relationships, work organization, learning and development opportunities, financial incentives, and organizational support. Each category is accompanied by specific motivation factors and model studies that provide evidence.

Table 2. Leadership styles and their influence on team motivation

Leadership style	Exemplary papers	Influence on Motivation
Transformational Leadership	Muganda and Pillay (2013), Zhang et al. (2018), Ng and Walker (2008), Tabassi et al. (2017), Tyssen et al. (2014), Raziq et al. (2024), Bonkoungou et al. (2022), Ding et al. (2017), Altaher et al. (2024), Aga et al. (2016), Nauman et al. (2022), Fareed et al. (2021)	Inspiration, motivation, and personal consideration are key elements of transformational leadership, which have been extensively researched regarding organizational results. Transformational leadership enhances promotion focus, inspiring teams to achieve higher quality and innovation in projects. Transformational leaders motivate, inspire, and help individuals to grow. Transformational leadership positively influences project success through goal-setting, role clarification, and problem-solving. Transformational leaders can motivate their teams and carry out any task efficiently. Four subscales measure it: Inspirational motivation, idealized influence, intellectual stimulation, and individualized consideration.
Shared leadership	Mayer et al. (2023), Scott-Young et al. (2019), Wu et al. (2021), Abson et al. (2024)	Shared leadership suggests that any team member can exhibit leadership behaviors, and the leadership that occurs is an influence process in which members seek to motivate, share knowledge, and support other group members. When they perform leadership functions, team members are motivated and willing to accept influence, thus contributing to the formation of shared leadership.
Transactional Leadership	Bonkoungou et al. (2022), Altaher et al. (2024), Zhang et al. (2018)	Transactional leadership centers around a system of clear expectations and defined roles. Motivating team members through contingent rewards and corrective actions.
Empowering leadership	Windeler et al. (2017), Zheng et al. (2024)	Empowering leadership is a solution to reduce developers' stress and enhance motivation in complex projects.
Humble Leadership	Ali et al. (2021), Waseem et al. (2023)	Humble leaders are sources of inspiration and motivation for team engagement to perform extraordinarily. Humble Leadership creates trust and collaboration, leading to motivation.

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Table 3. Motivation factors of team members and their exemplary studies

Categories (Themes)	Motivation factors	Exemplary papers
Emotional and psychological factors	Psychological empowerment	Koch et al. (2023), Ali et al. (2021), Piwowar-Sulej and Iqbal (2024), Malik et al. (2021), Zheng et al. (2024)
	Psychological safety	Pattanatornchai et al. (2024), Wu et al. (2024)
	Psychological capital	Marques et al. (2024)
	Project managers with high psychological resilience	Ren et al. (2024)
	Project managers and leaders' emotional intelligence	Sposito et al. (2024), Zhang et al. (2018), Rezvani et al. (2018), Castro et al. (2022)
	Emotional intelligence training	Turner and Lloyd-Walker (2008)
	Emotive communication	Connor et al. (2022)
	Cultural intelligence	Henderson et al. (2018)
	Positive emotions	Berg and Karlsen (2014)
Goals and their achievement	Goal-Setting, Goal orientation, Role clarification	Aga et al. (2016), Hofman et al. (2023)
	Achievement	Marnewick (2018)
	Goal clarity, Transparency	Li and Doolen (2014), Siddiqui et al. (2023), Sundström and Zika-Viktorsson (2009)
	Clearly defined project mission and objectives, vision	Anantatmula (2010), Christenson and Walker (2008)
Social factors of the relationship	Team relationship commitment, harmonious relationships, members' bond (strong ties), team-building, sense of belonging, sense of ownership, participation, team cooperation, connectedness, human interaction, spirit, team member support	Chang et al. (2013), Jitpaiboon et al. (2019), Imam and Zaheer (2021), Karlsen and Berg (2020), Seriki et al. (2010), Dasi et al. (2021), Yildirim and Korkmaz (2017), Al-Abbadi and Agyekum-Mensah (2022), Sense and Fernando (2011), Lumseyfai (2020), Shenhar (2004), Patanakul et al. (2016)
	Trust development, trust	Buvik and Rolfsen (2015), Badrinarayanan (2024), Muganda and Pillay (2013), Verburg et al. (2013), Yang et al. (2020), Castro et al. (2022), Anantatmula and Thomas (2010), Krog and Govender (2015)
	Recognition and feedback, work appreciation	Marnewick (2018), L. Zhang and Z. Zhang (2014), Yildirim and Korkmaz (2017), Unger-Aviram et al. (2013)
Motivation through job design	Work itself, the practical importance of work, a decent and respectful job, and a high responsibility job	Marnewick (2018), Tkachenko and Ardichvili (2020), Al-Abbadi and Agyekum-Mensah (2022)
	Task complexity, challenging tasks	Wu et al. (2024), Al-Abbadi and Agyekum-Mensah (2022)
Training and development	Competency development, advancement, and growth, personal growth/career improvement, self-growth, career opportunities, promotion focus	Desjardins et al. (2022), Marnewick (2018), Al-Abbadi and Agyekum-Mensah (2022), Sense and Fernando (2011), Tkachenko and Ardichvili (2020), Lai et al. (2018)
	HR management techniques, increasing project members' expert power, learning orientation, opportunities for learning, and professional interests	Apenko (2017), Jia et al. (2024), Khedhaouria et al. (2017), Patanakul et al. (2016), Tkachenko and Ardichvili (2020), Thamhain (2011)
Financial incentives	Team-based financial incentives, pay on time, rewards, pay amount, and well-being	L. Zhang and Z. Zhang (2014), Al-Abbadi and Agyekum-Mensah (2022), Sense and Fernando (2011)
Organizational support and work environment	Effective real-time team coordination, organizational support, appropriate work environment based on support, communication, influence tactics, and perceptual congruence	Mastrogiacomo et al. (2014), Waseem et al. (2024), Olszewski (2023), Muganda and Pillay (2013), Narayanaswamy et al. (2013)
	Management 3.0 (M3.0), iterative delivery, agile communication, team autonomy, decision-making ability, well-executed hard project management practices	Piwowar-Sulej et al. (2022), Koch et al. (2023), Malik et al. (2021), Al-Abbadi and Agyekum-Mensah (2022), Larsson et al. (2018)

Table 4. Motivation factors of project managers and their exemplary studies

Categories (Themes)	Motivation factors	Exemplary papers
Psychological and value factors	Psychological elements of engagement (competency, autonomy, relatedness)	Lee-Kelley et al. (2014)
	Preventing breaches of psychological contracts	Agarwal et al. (2021)
	Tai chi practices and values: self-direction and benevolence	Jirachiefpattana (2015)
	Team spirit	Cwikla and Jalocha (2015)
Goals and their achievement	Active participation in planning and decision-making processes, joint planning of pro-quality activities in the team, discussing the goals and needs of stakeholders	Wawak (2024)
	Team mastery and team-performance goal orientations	Chen and Lin (2018)
	Having the possibility to influence important decisions	Seiler et al. (2012)
Social factors of the relationship	Increased connection	Lee-Kelley et al. (2014)
	Working with a supportive and goal-oriented team	Seiler et al. (2012)
	Project leadership role in establishing trust, leadership inclusiveness	Anantatmula (2008), Cwikla and Jalocha (2015), Anantatmula and Thomas (2010), Chen and Lin (2018)
	Communication and well-thought-out management processes, clear communication rules feedback from management about the quality of work	Wawak (2024), Verburg et al. (2013)
Motivation through job design	Job crafting and work meaningfulness	Haffer et al. (2021)
	Enriched job/task design	Walker and Lloyd-Walker (2019)
	A clearly defined, enjoyable task	Seiler et al. (2012)
	Interesting activity and the possibility to pursue your ideas	Zwerenz (2019)
Training and development	Good opportunities for further training	Zwerenz (2019)
	Opportunities for learning	Patanakul et al. (2016)
	Strong networking with internal groups and the high reputation of the company	Zwerenz (2019)
	Coaching	Berg and Karlsen (2007)
Financial incentives	High outcome interdependence achieved by linking project manager compensation to achieving project objectives and ROI	Scott-Young and Samson (2008)
	PM rewards based on the project's performance	Scott-Young and Samson (2009)
Organizational support and work environment	Getting the necessary information and financial and personnel resources	Seiler et al. (2012)
	Top-down influence	Kortantamer (2023)
	Introducing tools supporting work efficiency, Good workplace equipment	Wawak (2024), Zwerenz (2019)
	Ensuring an even pace of work	Wawak (2024)
	Team member support	Patanakul et al. (2016)
	Good climate within the PM team, good working atmosphere, flexible working time models, job security	Zwerenz (2019)

Other studies have also mentioned time for project completion, storytelling, and effective real-time team coordination (the role of conversation and the role of evidence of understanding in real-time coordination). These factors confirm the importance of an integrated approach to motivation management, which considers both personal and collective needs and organizational capabilities.

A small number of studies consider the motivation factors of the project leader. Table 5 provides an overview of the key motivation factors that influence the motivation of a project team leader. It classifies these factors into organizational support, goal achievement, psychological and social impact, and work organization.

Table 6 provides an overview of the key motivation factors that influence the motivation of a project team member, project manager, and project leader. It also shows the main differences between these factors for each of them. Team members are more focused on emotional comfort, clear goals, cohesion, coordination, career growth, and timely pay. Project managers are motivated by the possibility of influence, strategic planning, social support, resources, freedom of expression, and professional development, and their rewards depend on the project's suc-

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Table 5. Motivation factors of project leaders and their exemplary studies

Categories (Themes)	Motivation factors	Exemplary papers
Organizational support and work environment	Project sponsor	Ng and Walker (2008)
Goals and their achievement	Intrinsic rewards: "A sense of achievement and fulfillment"	Zhu et al. (2019)
Psychological and social factors	Obsessive passion	Omorede et al. (2013)
	Diversity in mental models	Chang et al. (2021)
Leader practices	Leaders practice leading a learning project team	Chang et al. (2021)
	Being a horizontal leader	Zhu et al. (2019)
Motivation through job design	High complexity job	Zhu et al. (2019)

Table 6. Features of the motivation factors of the project team

Motivation factors	Team members	Project managers	Project leaders
Psychological factors	Focused on emotional comfort, support, and safety	Focused on engagement and preventing loss of motivation	Focused on personal ambition and cognitive diversity
Goals and their achievement	Need clear goals and a focus on achievement	Value influence and strategic planning	Motivated by an inner sense of success
Social factors of the relationship	Motivated by strong ties	Motivated by social support and leadership	Motivated by leading practices
Organizational support and work environment	Focus on coordination	Focus on resources and a working atmosphere	Depend on the support of sponsors
Motivation through job design	Motivated by the importance of work	Motivated by freedom of expression	Motivated by the complexity of the tasks
Training and development	Focused on career growth	Focused on learning and networking	Interested in managing learning teams
Financial incentives	Pay on time, pay the amount	Rewards based on the project's performance	Intangible rewards

cess. Project leaders, in turn, are focused on personal ambitions, the complexity of tasks, the support of sponsors and intangible rewards, and the management of learning teams.

The results strengthen and expand existing motivation systems, demonstrating their differentiated importance for different team roles. Classical theories such as Herzberg's two-factor theory and the theory of self-determination have been validated in the context of the project, but their application varies. For example, psychological capabilities and emotional intelligence are critical to team members, while autonomy and decision-making authority are more important to project managers. This difference confirms the need for an expanded theoretical approach that considers team motivation differences. Bibliometric analysis also confirms the importance of transformational and shared leadership styles for motivating project teams. These approaches to leadership are invariably associated with increased engagement, collaboration, and project success. Despite numerous studies on the role of leadership in motivation, very few studies have been conducted on the motivation of the project manager himself. Systematic analysis shows a constant interest in research on clarity of goals, complexity of tasks, and workplace planning, which indicates their continued importance for increasing motivation. More and more attention is being paid to emotional intelligence and psychological safety, reflecting a shift toward understanding interpersonal and intrapersonal factors in project teams. These results correlate with previous research, which states that participants who understand that others highly value their contributions or that others can help in their future career growth feel obligated to reciprocate, which strengthens the atmosphere of cooperation (Cabrera & Cabrera, 2005) and creates emotional commitment (Gardner et al., 2011).

Despite using a wide range of methods for collecting primary information in articles, this review draws attention to the lack of research tracking motivation factors throughout the project lifecycle. Using methods such as longitudinal studies would allow one to eliminate this gap. Although the selection of articles for the study was carried out carefully, the conclusions of this study can be considered as a basis, and other factors cannot be excluded. One exception to this study is that the review included articles published from 2004 to 2024 and only from the Web of Science database. Another limitation is that there

has been an underrepresentation of research from emerging regions, such as Central Asia, where there might be culturally distinctive motivational dynamics not reflected in the current literature.

This discussion highlights the multifaceted nature of motivation in project management. Although significant progress has been made in understanding these factors, the identified gaps point to opportunities for more inclusive, diverse research. These results from systematic and bibliometric reviews can complement the body of knowledge further as well as better enable managing project teams.

CONCLUSION

The primary purpose of this study was to comprehensively map the motivational factors of project team members, project managers, and project leaders. The analysis identifies key motivation and leadership style elements through a systematic and bibliometric approach. Determining motivation factors for project team members revealed that the factors can be classified into general categories: psychological factors (e.g., empowerment, emotional intelligence), goal orientation (goal clarity, achievement), social factors (trust, team cohesion), job design (task complexity, autonomy), training and development (career growth, learning opportunities), financial incentives (pay, recognition), and organizational support (working environment, communication, tools). These categories, however, vary based on the team member's position. Team members prioritize emotional well-being, clarity of goals, and career growth; project managers are motivated by strategic autonomy, influence, and recognition associated with project outcomes, while project managers emphasize task complexity, cognitive diversity, and intrinsic rewards.

The results of the study allow one to draw the following conclusions. Firstly, motivation in project teams is not a universal concept but a dynamic and role-dependent construct. Secondly, leadership style is central in shaping motivational dynamics at all team levels, with transformational and shared leadership being the most effective. Third, organizations aiming to increase project success should adopt differentiated motivation strategies tailored to each project role. Finally, the noticeable lack of research on project leaders' motivation signals a valuable direction for future studies. More research is needed to examine motivation factors in different cultural settings, especially in underrepresented regions identified as a result of bibliometric analysis. This paper provides a solid foundation for academics and practitioners to understand motivation in project management, enabling organizations to build highly motivated and effective teams. Identifying individual factors for each team member will facilitate the selection of a suitable motivator for each of them, ultimately leading to increased team engagement, innovation, and project effectiveness.

AUTHOR CONTRIBUTIONS

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