



Managing Research Projects in the Context of the Knowledge Economy: Success Factors and Challenges

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Abstract: Academic research conducted in universities and research centres is a major source of knowledge creation and dissemination within society. However, the success of research projects is influenced by multiple factors and requires a multi-level analysis to identify the key dimensions critical to managing a research project. The aim of this study is therefore to elucidate the factors contributing to the success of research projects in Algeria, considering the specificities of the local context and the challenges faced by Algerian researchers. The methodology adopted in this study relies on a qualitative approach based on data collection through 27 semi-structured interviews with research project managers in many universities and research centres across Algeria. The study results reveal that institutional support, particularly through administrative assistance and a favourable work environment, emerges as the fundamental factor in ensuring the success of research projects in Algeria. At the same time, strong leadership of the project team and effective management of project activities are also important elements in the project's success. This paper puts forward practical recommendations for improving day-to-day project management and enhancing researchers' motivation and skills to tackle field-related challenges. From this perspective, it is imperative to encourage administrative flexibility at all levels in order to enable more efficient management of research projects. It is also advisable to establish a work environment in research institutions based on active listening and the continuous involvement of researchers. Finally, developing the human capital of the research team through targeted training can enhance the research team's project management skills.

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Introduction

Scientific research is at the heart of knowledge creation and dissemination, contributing to economic and societal development in many ways. In this context, universities and public research centers contribute to this dynamic knowledge-building through research projects in a number of fields. These projects aim to generate and disseminate innovative ideas that transform the economic field and create benefits for the stakeholders (Cai et al., 2020; Kumari et al., 2020; Herrera et al., 2018; Schaeffer et al., 2018). Through their research and innovation activities, universities generate valuable knowledge that is disseminated across various industries (Chesbrough et al., 2024; Reichert, 2019). The role of the university has therefore evolved to contribute to the dynamics of innovation and economic development (Etzkowitz, 2003; Leydesdorff & Etzkowitz, 1998).

Due to their dynamic nature, research and development (R&D) projects are characterized by complexity, a high level of risk and uncertainty (Mahboobeh & Jose Ramon Otegi-Olsalo, 2019). Moreover, project success in the research context is multidimensional and complex (Shenhar et al., 2001). The difficulty in defining success is linked to the very nature of these projects and the issues involved in their management. These issues relate not only to the conditions under which the project is carried out, but also to the implications of its

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outcomes for the research team, the research institution and, above all, the socio-economic sector at large. Studying success factors is also a difficult task, requiring analysis at several levels. It is within this perspective that the added value of this research lies: it aims to provide original insights into the factors influencing the success of research projects within the Algerian academic context, while identifying the main challenges encountered in their management. While the literature on the success factors is rich and provides us with an exhaustive list of these factors, their study in the Algerian context seems very promising for several reasons.

In Algeria, the national scientific research and technological development system seeks to provide the productive system with the necessary knowledge and skills for developing its competitiveness in the market. Despite the crucial importance of research projects for Algeria and their contribution to economic development, the success of these projects remains undermined by a number of challenges. There is therefore a pressing need to study the factors that influence research project success.

Many existing studies have explored various dimensions of the academic research system in Algeria, including the impact of international partnerships on the improvement of research programs (Khelfaoui, 2001) and university-industry collaborations to strengthen research capacities (Saad et al., 2021). However, research performance remains a largely unexplored field, particularly from the perspective of the success conditions of research projects. Yet, this issue is central to the integration of universities into the dynamics of innovation and knowledge production. This analytical gap limits the in-depth understanding of the systemic challenges faced by these projects. In this context, the study of the success factors of research projects in Algeria is both relevant and necessary.

Based on these considerations, this work aims to address the following questions: What are the key success factors for academic research projects in Algeria? What are the primary challenges to their effective management? Consequently, we aim to understand the institutional and human factors that determine research project success and also impact their implementation. This study intends to propose relevant recommendations as well as areas for improvement to enhance the effectiveness and impact of projects in the context of academic research in Algeria.

This work is divided into three main parts. The first part consists of a literature review aimed at analyzing the two concepts of criteria and success factors in research projects. The second part details the study's methodology, specifying the data collection tools and analytical approaches. Finally, the third part outlines the results obtained from the qualitative data analysis, involving a contextualization of the success factors and proposing recommendations for improving research project management.

Literature review

Evaluating the success of research projects

Regardless of the type of project, assessing its success is more complex than simply evaluating the time and costs involved in its implementation (Castro et al., 2019). Defining the success of a project depends on many factors, including the nature of the project, its complexity and size. For this reason, we need a flexible approach to measuring success (Westerveld, 2003). Several dimensions are considered when judging the success of a project, reflecting the diverse perspectives of the stakeholders. Hence, the project success has evolved from the simplistic concept of a triple constraint, known as the iron triangle (Atkinson, 1999) (time, scope/quality and cost) to a more elaborate approach combining efficiency and impact. This approach considers both the short-term project management efficiency and the longer-term achievement of project results. The success framework of Freeman and Beale (1992) emphasizes these two dimensions (Freeman & Beale, 1992)

and serves as the foundation for the development of several project success models. For example, Joslin (2019) proposes a model that includes project execution effectiveness, managerial and organizational implications, manufacturability, personal growth and business performance (project impact) and stakeholder satisfaction (Joslin, 2019). Other researchers (Shenhar et al., 2001) have identified four major dimensions of success in their analysis: project effectiveness, customer impact, direct commercial and organizational success, and future readiness. The importance of each dimension varies according to the phases of the project and the level of technological uncertainty.

The scope and performance criterion mean that the product is produced according to technical specifications and meets all the functionalities required by users. The impact on the customer is measured through customer satisfaction: the customer is satisfied when the product perfectly meets their needs and solves their specific problems. In addition, the positive appreciation of the team members means that they were happy during the project, but also happy with the results of the project (Castro et al., 2019). Future potential refers to the project's prospects and the improvement of organizational capabilities, by creating a new market, product and technology.

R&D projects primarily aim to produce knowledge that can be applied in different ways (Klaus-Rosińska & Pliński, 2023; Wingate, 2015). In addition to the general success criteria that apply to all projects, there are additional criteria specific to academic research projects. These relate to the ability to develop new knowledge by integrating the work of research team members. Success in this context is reflected in the number of publications and patents, the development of start-ups, the enhancement of the department's reputation and the facilitation of new sources of funding (Capaldo et al., 2021).

Regarding publications, the three main mechanisms used by universities to assess the quality of their staff's research outputs are: the number of publications, peer review, and bibliometric indicators (Huong Nguyen & Lynn Meek, 2015). According to Taylor (2006), these success factors represent the key performance indicators used in research universities. In the case of research projects, the project's potential can be expressed through scientific reputation and enhanced innovation capabilities. This is linked in particular to the generation of tacit and implicit knowledge (Mahboobeh & Farokhad, 2019).

The critical success factors of a research project

It is important to make a distinction between success criteria, in other words, the measures by which the success or failure of a project will be judged, and success factors, that is to say, the elements of the management system that lead directly or indirectly to project success (Prabhakar, 2008). Project success criteria are therefore dependent variables that measure the successful outcome of a project, while project success factors facilitate the achievement of this success (Lamprou & Vagiona, 2018). Consequently, critical success factors reflect key organizational areas that support project success.

Critical factors influencing the success of a project are commonly associated with the following four areas. The project itself (e.g., clear objectives, realistic timetable, adequate funds, resources, size, complexity), the project manager (leadership, effective conflict resolution, communication), the project team members (competence, profile), the organization (top management support, authority, management style) and the external environment (customer, technological and socio-political environment) (Lamprou & Vagiona, 2018). Thus, effective execution is linked to the following factors: clear objectives, a realistic timetable, management support, and adequate funds/resources (Fortune et al., 2011). The success of research projects, therefore, depends not only on the technical and scientific aspects of the project but also on the overall conditions in which the research activity takes place. In fact, a supportive work environment, characterized by the availability of resources and administrative and logistical support, is necessary for

effective project implementation. The main critical success factors identified in the literature are summarised in Table 1.

Despite their specific nature, the main characteristics of R&D projects must be fully respected. The lifecycle of R&D projects must be analyzed as a multi-phase process, as is the case for the majority of projects (Vicente-Oliva et al., 2015; Wingate, 2015). Research and teaching institutions generally use a traditional management approach (Ivetić & Ilić, 2020; Zornitsa Yordanova, 2020) which comprises five phases: initiation, planning, execution, monitoring and control, and project closure (Fernandes et al., 2020) (see Table 1).

Table 1. Critical success factors of a project

Factors	Sub-factors
Leadership and the team	Project manager
	Project team member
	Collaboration within the team
Organizational	Top management support
	Project size and complexity
	Favorable work environment and flexibility
Resources	Funding, Financial support
	Technology Facilities
External environment	Relationship with clients
	Technological environment
	Political and social factors
Project management activities	Project time/cost/quality management
	Project risk/control/ procurement management
	Project communication
	Project HR management

Source: own processing

These factors apply to most projects, regardless of their nature. Nevertheless, in the context of research projects, some specific elements must be considered to address the particularities of productive research activities. Table 2 presents the structural and human characteristics of an environment conducive to high-performance scientific research.

Table 2. Characteristics of a productive research environment

Organisational and institutional factors	Human and cultural factors
Decentralized organization	Leadership with research expertise and skills
Assertive, participative governance	Sufficient size, age, and diversity of the research group
Accessible resources	Positive group climate
Appropriate rewards	Strong research emphasis
Clear goals serving a coordinating function	Frequent communication
Focus on recruitment and selection	Distinctive research culture

Source: elaborated by the authors based on Bland and Ruffin (1992)

Universities, as primary sources of knowledge and innovation, require a supportive administrative framework that enables researchers to produce high-quality research outcomes (Ayandibu, 2023). In this regard, participative governance and decentralised organisation are examples of organisational factors that contribute to the success of research projects. Together, these factors enhance stakeholder engagement, foster innovation by providing greater autonomy to individuals, and promote efficient information flow (Bland & Ruffin, 1992).

Furthermore, to stimulate innovation within research projects, researchers must be able to work efficiently without being hindered by bureaucratic constraints (Taylor, 2006). Consequently, research-oriented universities tend to decentralise decision-making structures and empower researchers (Huong Nguyen & Lynn Meek, 2015). To promote

innovation, university managers should offer more autonomy, ensure adequate resources, and reduce administrative constraints to facilitate free exchanges among researchers (Jin & Sun, 2010).

A favourable environment is a prerequisite for research, but ultimately, it is the researchers who drive the research forward. Therefore, it is essential to focus on selecting competent researchers, motivating them, and developing their scientific performance. Autonomy and recognition are crucial managerial practices that influence performance (Edgar & Geare, 2013). It is important to emphasise that, beyond these administrative and managerial aspects, additional preconditions are necessary, particularly financial and material resources (Bazeley, 2010). The availability of resources includes access to appropriate equipment, adequate workspace, and funding aligned with the objectives of research projects (Jyoti et al., 2010).

It is worth mentioning that the importance of these factors varies according to the stage of the project. In the initiation stage, priority is given to defining the research problems and to the selection of team members (Kulatunga et al., 2009). In the conceptualization stage, the emphasis is placed on the project feasibility study, the determination of tasks and responsibilities and the setting of clear objectives (Sun & Wing, 2005). In the project implementation stage, the focus is on facilitating teamwork (management support is essential), motivating and empowering people, and fostering communication and collaboration (Hanif et al., 2021).

Methodology

This research is part of a project conducted by CREAD (Centre for Applied Economic Research for Development). The adopted methodology relies on a qualitative approach based on data collection through semi-structured interviews with research project managers. This allows an in-depth understanding of the issues related to our research question. Hence, the principle of the qualitative approach is to discover and reconstruct the meaning that participants give to the topics of the study. These participants are not isolated; they are part of a broader network of actors and actions, participating in the social dynamics of various organizational environments.

In this context, an interview guide was developed by CREAD researchers, structuring the main topics to be addressed. It consists of open-ended questions, giving the interviewee the freedom to respond so that they can express themselves voluntarily on the conditions under which their research work was carried out. Table 3 below highlights these themes.

Table 3. Interview guide themes

1. Assessment of project implementation conditions and problems faced (Availability of resources, delays, human resource issues)
2. Success factors for research projects (The management support, the project's leader role)
3. Perspectives and recommendations (Recommendations for decision-makers, the team)

Source: own processing

The empirical study focuses on a sample of research projects across several higher education and research institutions in Algeria. In this respect, we were keen to diversify our sample in line with the problem under study. The final sample consists of 27 project managers from different positions, as illustrated in the following table. Participants were selected primarily based on their expertise. All the researchers have proven experience in the field of research (at least 3 of them have experience in international projects). We aimed to gather a wide range of opinions until reaching information saturation (data repetition and redundancy). In this case, our sample represents a high degree of validity

and confidence in the results of the study. Table 4 illustrates the demographic characteristics of the interview participants.

Table 4. Interviewees' demographic characteristics

Demographic characteristics		Number
Gender	Male	16
	Female	11
Experience	More than 5 years	4
	Less than 5 years	23
Field of study	Social Sciences and Humanities	5
	Economics, Business and Management	7
	Science and Technology	6
	Engineering	5
	Medical and Health Sciences	4
Position	Research centre director	1
	Division Director	4
	Senior researcher	6
	Postgraduate director	2
	Laboratory Director	6
	Lecturer	8

Source: own processing

This study was conducted over four months, from February to May 2024. The interviews were audio-recorded and transcribed for thematic content analysis. This work is based on the elaboration of a coding system. Two coding methods are considered for this purpose: an open model in which the categories are induced progressively (they did not exist before); the second is where they are predetermined. The first step of the coding analysis involved identifying nodes of meaning to create a code. The coding process enables the construction of nodes in the form of a tree of nodes; the analysis then consists of uncovering links, underlying logic, understanding the structure of influence and interpretation among the elements of the subject.

Many approaches are used to carry out a content analysis. In our case, we have chosen to classify and categorize the themes identified in the nodes into one category (a common denominator between the data), so that verbatim extracts on the same theme are grouped together. Additionally, tables and verbatim are used to support and synthesize the analysis.

Results and discussion

Academic research in Algeria is governed by the Research Orientation Law 98-11 of 1998, amended and supplemented in 2008. The introduction of this law confirmed the authorities' interest in developing scientific research by setting research priorities and strengthening the allocation of human, financial and material resources to research laboratories (Ait, 2021). By 2024, the number of approved laboratories at higher education establishments had risen to 1851, with a network comprising 105 establishments (MESRS, 2024). There is also a scientific research network made up of 15 establishments. This network comprises ten research centres and five research units. In Algeria, public research policies are based on several national research and technological development programs, through which researchers are called upon to establish new links between their research and the socio-economic world.

Assessment of project implementation conditions and problems faced

Examining the success factors of research projects means addressing the conditions under which they are conducted and the critical dimensions of project implementation, which encompass the general climate in which research projects take place. It also involves

understanding the difficulties encountered in the field and the obstacles faced on a day-to-day basis.

A key dimension in the project implementation is the availability of resources. This includes access to equipment, basic infrastructure and funding. These elements are considered basic conditions for carrying out research projects. While the Algerian government has provided a great deal of resources in this area, field challenges have compromised their mobilization, highlighting shortcomings in the day-to-day research management system. One of the project managers commented: *"We are in the presence of an official discourse that advocates research, but which is hampered by practices in the field; unfortunately, there is a tendency towards more centralization"*.

A concrete example of this paralysing bureaucracy was provided by a researcher: *"It's an entire bureaucratic process that holds you back. For example, when you request equipment, you have to go through a procurement procedure. The procedure has to be prepared by a specific department, you see!! Sometimes it's not done properly, there are mistakes, and it needs to be corrected. That takes a lot of time, and sometimes, it just stops there"*.

Another example that reflects these operational difficulties relates to optimizing resource use. The researchers highlighted a failure in the system for monitoring and maintaining equipment. In this regard, one manager pointed out: *"We had a scanning microscope that had broken down, so after many years we brought a gentleman in to repair it. He informed us that after all these years, it was no longer operational, even though it had cost 10 million Dinars"*.

The availability of resources is consistently presented as an obstacle; in this regard, a laboratory head shared the following observation with us: *"The issue does not lie in a lack of ideas or skills — those are certainly present. The real challenge is the lack of resources. I am faced with hundreds of requests for access to basic equipment, simply to conduct routine experiments that should otherwise be easily achievable"*.

Although funding is available, there is still a problem with its management, resulting in poor administrative management of available budgets. Funding-related problems are recurrent, notably the lack of clarity in funding processes and the limited periodicity of calls for projects.

Administration and procedures

Administrative constraints and delays linked to regulations and bureaucracy appear to be major obstacles. These difficulties slow down projects and complicate their day-to-day management, reinforcing the researcher's dependence on the administration. One manager noted: *"We are in front of a research system that operates with an administration that serves civil servants rather than researchers. A management system that does not reflect the specific nature of research activity"*.

Researchers are often faced with multiple delays in file approval or problems related to importing equipment, which hampers their efficiency. As a result, administrative constraints have become a major source of frustration. Despite the availability of researchers and their ability to organize their work efficiently. Administrative and logistical constraints hinder their work. *"Administrative tasks overshadow scientific ones - lost in administrative paperwork, with delays and wasted effort and energy"*, one manager indicated.

Once these basic conditions are guaranteed, the project gets underway, shedding light on other organizational issues within the research team. At this level of analysis, the human dimension of the project is highlighted. Table 5 summarises the main obstacles encountered during project implementation.

Table 5. Project implementation problems

Categories	Sub-categories	Occurrence of codes
Administrative and bureaucratic problems	Rigid bureaucracy and operational standstill	Highly cited factors
	Slow administrative process	
	Lack of monitoring and ambiguity in role definition	
Human and relational problems	Demotivation of team members	Moderately cited factors
	Lack of involvement and disengagement	
	Weak links with the socio-economic world	
Problems of resources	Insufficient resources and technical support	Less cited factors
	Optimisation of use and maintenance	

Source: own processing

Success factors

The analysis identified the factors contributing to the success of research projects. The factors identified as determinants of project success are detailed in Table 6.

Table 6. Success factors for research projects

Categories	Sub-categories	Occurrence of codes
Institutional support	Administrative support and guidance	Highly cited factors
	Favourable environment and flexibility	
Leadership and collaboration	Role of the team leader	Moderately cited factors
	Motivation and perseverance of the researcher/team	
Resource and project management	Effective horizontal and vertical communication	Less cited factors
	Financial support, appropriate equipment	
	Effective project management	
	Project market orientation and impact	

Source: own processing

This analysis reveals that project success depends on a combination of administrative, organizational and material factors. Institutional support, particularly in the form of administrative support and guidance, is revealed as an important lever for project success. The administration must create a flexible and favorable environment for the implementation of research projects, enabling the rapid resolution of any problems: *“The problem of wanting too much supervision is annoying, you have to find the right balance between supervision and allowing flexibility for the researcher, you can't leave people unsupervised, but too much supervision kills the work”*. One manager emphasized.

In terms of organizational factors, the importance of management and leadership can be seen in the different roles played by the leader. Between negotiation, coordination and motivation, the leader in the Algerian research context is the pivot on which much of the project's success depends. Collaboration and cooperation are also central to this success, with teamwork based on complementary skills and harmonious coordination.

The issue of leadership and the mobilisation of the research team is therefore central to the success of projects. In this regard, a project leader shared with us the following perspective on the role of the team leader: *“Here, I give you an example of laboratory leadership. The leader plays a crucial role in addressing issues in real-time and focusing on the work. There needs to be frequent communication, involving people in laboratory decisions so they feel responsible and have a stake in the final decisions”*.

Beyond the need to secure the necessary funding for the project and to effectively manage project activities, it is also essential to master the project's relationship with its external environment. In this sense, partnership with the socio-economic sector is necessary to

align research projects with the real needs of the economic sector, to respond to practical and current issues, and to strengthen interactions with players in this environment, enabling the university to integrate into the innovation ecosystem (Matt et al., 2021; Schaeffer et al., 2018).

While the availability of resources and financing is a fundamental requirement for starting up and maintaining a project (Lamprou & Vagiona, 2018), effective project implementation and success in the Algerian research context are determined by critical factors associated with institutional and organizational dimensions. From this perspective, two factors appear to play an important role in the success of research projects: institutional support and team leadership. These factors contribute synergistically to the overall success of research projects. Institutional support, in the form of a flexible administrative environment, should enable researchers to deal with unexpected challenges that frequently arise in research projects.

Institutional support is reflected in a research-conducive work environment across the entire research institution. This was confirmed by the following statement expressed by one of the project leaders: *"There must be a supportive environment for research. Some people want to work, and it is essential to make their tasks easier, both administratively and bureaucratically. Every person in the research center must contribute to facilitating the research process"*. This would enable the adoption of a more flexible management system, thereby facilitating the daily work of research, as mentioned by one of the researchers: *"When talking about perspectives, there needs to be faster and more flexible project management methods. The acquisition and procurement procedures must be simplified. Even if you provide funding, if I face difficulties in spending it, it won't be meaningful"*.

Studies have confirmed that a work environment facilitating cutting-edge research and significant flexibility for teams to manage the resources allocated to them are two organizational aspects that play a decisive role in the success of a research project (Dieng, 2021). In this respect, it's important to achieve the right balance between excessive supervision and lack of control. In addition, institutional support takes the form of the administration's ability to support the researcher's work through proactive management. Otherwise, long response times and unnecessary administrative hurdles are often encountered.

Moreover, institutional support involves facilitating the project's relations with its environment to guarantee its impact. In this respect, it should be remembered that one of the key criteria for the success of a research project is its impact and the satisfaction of its partners (Shenhar et al., 2001). Hence, the relevance of scientific research relies on an administrative framework conducive to innovation, one that encourages researchers to take initiative and fosters interaction with socio-economic stakeholders. This implies the existence of a supportive ecosystem for the co-production and exchange of knowledge within the innovation system (Kozirog et al., 2022; Reichert, 2019). At this level of analysis, the innovation ecosystem is characterized by complex interactions among actors, all oriented toward fostering innovation (Matt et al., 2021; Schaeffer et al., 2018). The challenge lies in setting up a management system and an institutional framework capable of consolidating relations and facilitating exchanges with partners from the socio-economic world, particularly in the context of collaborative research (Nahla, 2023). Hence, universities and industries in Algeria have different cultures, preventing a mutual understanding of the expectations and priority needs of both parties (Benbouzid & Dahmani, 2020). This situation is exacerbated by administrative rigidity, which limits the flexibility required to cooperate with partners.

The implementation of decentralized methods of promoting research and innovation seems to be the only alternative for breaking the deadlock in the learning process between universities and the socio-economic world, and creating new knowledge (Amdaoud, 2016). The success of research projects depends on the establishment of a management system that promotes knowledge sharing, collaboration, and initiative. Consequently, the

internal managerial dynamics of the research institution must also be reflected in the adoption of flexible and open organizational structures and management approaches that place researchers and human capital at the core of the strategic vision. Both internal and external collaboration networks should be actively encouraged and facilitated.

It is also worth pointing out that the importance of success factors varies across the different stages of the project. Institutional support in the form of flexibility and guidance seems to be a determining factor at all these stages. In fact, at each stage of the project, the researcher needs simple procedures and appropriate support mechanisms in order to work properly. Furthermore, leadership and the ability to motivate teams are more decisive in the project implementation phase (Hanif et al., 2021). During this phase, regular meetings, internal communication and the development of horizontal and vertical collaboration help to maintain a positive work dynamic and a high level of member involvement. It is therefore important to ensure that the success factors are mobilized at all stages of the project. The research project is a unique process, and any failure to mobilize resources at one stage will impact the smooth running of the whole project. At this stage, the project manager's job is to identify the importance of these factors throughout the various stages of the project.

Conclusion and research perspectives

In conclusion, this research has highlighted the necessary conditions for research project success in Algeria by examining both obstacles and success factors. The success of research projects relies on several human and institutional factors. Hence, the project leader, the motivation of the team, and the effective management of resources contribute to the success of projects. However, the most influential factor is institutional support, particularly in the form of administrative support and the establishment of a flexible, research-friendly environment.

A lack of support and guidance for researchers, on the other hand, hampers initiative and can lead to demotivation within the team, in a climate that is hardly encouraging research. In fact, despite significant efforts in infrastructure and funding, the implementation of research projects continues to be hindered by structural dysfunctions. The rigidity of procedures, inefficient management of resources, and the lack of coordination among stakeholders remain major obstacles. These issues deepen the gap between the stated ambitions of scientific policy and the everyday realities faced by researchers.

This study highlights the need for academic and administrative authorities to provide constant support and appropriate resource management to maximize the chances of research project success in Algeria. Furthermore, the study's findings call for a thorough revision of management and governance practices. From one perspective, administrative managers are urged to adopt a more flexible approach, simplify procedures, and establish active listening mechanisms to better understand and respond to the needs and expectations of researchers, thereby supporting their engagement in the research process. From the other perspective, academic authorities are encouraged to clarify governance structures, implement results-based evaluation systems, and involve researchers in institutional decision-making strategies. At the same time, research teams are expected to strengthen their skills through continuous training, particularly in project management, and to foster greater cohesion and leadership within working groups to stimulate creativity and collective intelligence.

This research work opens the way to a deeper understanding of the factors behind the success of projects in the Algerian research context. As a result, several perspectives of research can be explored to examine in greater detail the impact of institutional and organizational factors on research activity. Analysis of public research policies would prove a relevant way of revealing the origins of the institutional deficiencies. The issue of research governance needs to be studied in depth to analyze the effectiveness of

governance structures and administrative practices. At the intermediate level, the study of the strategies adopted by research teams to address the previously identified problems is also a promising avenue for future research. Finally, the study of academic leadership practices in the Algerian research context should highlight the project leader's responsibility in fostering collective team engagement and the diversity of roles the leader assumes in managing several dimensions of the research project.

Ultimately, the success of academic research projects in Algeria depends on the ability to build a system conducive to knowledge production, based on the complementarity relationship between effective management, scientific autonomy, and institutional support. Only through the sustained commitment of the stakeholders involved, aimed at overcoming institutional barriers and fully unlocking the potential of researchers, that Algeria's research system can become a strategic driver of the country's economic and social development.

The analysis highlights several challenges facing research in Algeria, as well as critical success factors for research projects. As a result, key insights emerge regarding the management and organization of research. The first step in improving the day-to-day management of research is to promote administrative flexibility, decentralization and simplification of procedures (for example, the acquisition of equipment). Secondly, researchers need to be enabled to better manage their projects by working more flexibly. This has to do with the internal organization of the team, i.e. the way in which the team is formed and managed, but also with the team's day-to-day work.

In addition, the administration's constant commitment to creating a favorable working climate based on dialogue and listening is essential. To achieve this, it is important to implement a policy of active listening with researchers to understand their needs and inspirations regarding the management of research at universities and research centres. Involving researchers in the management of the institution as well as in the decision-making process at different levels is also essential. According to researchers, this aspect is a priority for improving the academic research system in Algeria. In fact, in many cases, it is not a lack of resources that is the problem, but rather the wrong management approach, or sometimes the failure to consider the real needs of researchers and their requirements, which causes problems later in the successful implementation of the project.

At the same time, it is essential to enable fluid communication and collaboration between project stakeholders (researchers, administration, external partners). In fact, collaboration is the essence of the knowledge creation process, it should be facilitated and promoted. Hence, we should facilitate and encourage the integration of researchers into their academic and institutional environment and strengthen socio-economic partnerships. It's worth noting that in the context of research in Algeria, many administrative barriers prevent these actors from connecting, making it so important to address this issue.

Finally, the administration should keep providing the necessary support and facilitate the researcher's work by giving them access to sufficient funding and material resources. It's important to remember that a research project cannot start without adequate resources. The availability of financial resources is the basic condition for getting the project off the ground; without it, the researcher is stuck.

There is a need to strengthen the governance of research projects and to review research policy. For this purpose, it is crucial to establish a clearer research policy and create an appropriate institutional framework (introduce clearer and more fluid regulations). Moreover, changing the way in which projects are monitored and evaluated (moving towards an evaluation based on deliverables and objectives is also a priority) is necessary to ensure the project quality and performance. It is recommended to clarify the roles of research bodies and stakeholders: failure is often linked to a lack of governance on the part of administrative structures and a failure to define roles. This could be one of the

main weaknesses of the research governance system in Algeria, with serious consequences for research (in particular delays in the implementation of research programs and the ineffectiveness of decision-making). Finally, involving researchers in developing the research strategy and considering their proposals should become the new norm in research institutions.

One important recommendation is to develop the human factor and leadership through continuous training of researchers and motivation enhancement. At this stage, we need to seize opportunities for continuous training for researchers, particularly training in project management and specific research techniques. Training creates new potential for researchers to meet the challenges of the project.

The composition of the team should also be taken into consideration. The research project leader must be careful when selecting team members (competent researchers, easy to work with). The human component of the team is therefore a critical success factor of the research team. Indeed, the collective success of the team is the sum of individual skills, enhanced by the synergy and dynamics of the team. Hence, it is necessary to select members who have complementary skills and who are also capable of working in a group. Sometimes individuals possess the required competencies but do not adhere to the team's objectives, thereby creating problems for the project's functioning. Sharing prior collaborative work experience can serve as a very good indicator of the individual's future commitment to the team.

Another important aspect concerns the internal dynamics of the research team and its capacity to generate ideas to strengthen innovation. At this stage, it is important to strengthen collaboration and communication within the team through regular meetings. These meetings allow members to exchange ideas, discuss work progress, and collectively find solutions to encountered problems. This interaction process facilitates the genesis of new ideas and promotes collective learning, provided that a climate of mutual trust prevails within the team, where all members feel respected and encouraged to express themselves freely. These conditions allow the research team to fully assume its role as the basic unit in the genesis of innovation, which contributes to wealth creation for funding aligned with the objectives of research projects, both the economy and society as a whole.

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