The level of maturity of SMEs from a project management perspective Case Study of the Loan Guarantee Fund (FGAR) during (2004-2019)

Mansour BELATRECHE[1], Pr Hayet BENHARRAT [2]
[1] Abdelhamid Ibn Badis University, Mansour.belatreche@univ-mosta.dz
[2] Abdelhamid Ibn Badis University, hayat.benharrat@univ-mosta.dz

Received: 24./04/2021 *Accepted: 13./06/2020* *Published:30./06/2020*

Abstract:

This paper aims to reveal the level of maturity of Algerian small and medium-enterprises to manage their projects, and this is due to its importance in financing projects eligible for economic growth. In order to highlight this importance, the Loan Guarantee Fund (FGAR) was chosen as an important mechanism to support of the SME sector.

The study concluded that there are indicators of project management maturity of small and medium-sized enterprises through the creation and expansion of their projects in order to develop of the economy of our country.

Keywords: Project management; PM maturity model; FGAR; SME.
Jel Classification Codes: O32 ،M12.

***Corresponding author**: pr BENHARRAT Hayet,* Abdelhamid Ibn Badis University
e-mail: hayat.benharrat@univ-mosta.dz

1. INTRODUCTION

The pace towards the development of project management concept was clear and blatant. The concept knew multiple contribution by professionals, academic researchers, computer scientists, sociologists, leaders and mathematicians who have contributed to this paradigm richness and diversity on different plans: knowledge, practice and perspectives.

Over the past 20 years, there has been an improvement in the quality and rigour of project management research. In the 1970s practitioners, who set the research agenda and style, dominated research in project management. Then in the 1980s, it was dominated by the professional associations, all of whom wanted to develop their bodies of knowledge as the basis of their certification programs. The result of this study(Turner et al., 2011) was that research in project management was very practitioner oriented. However over the past 20 years, there has been a substantial improvement in the quality and rigour of research in project management, particularly: a), it is based on recent theory development; b) it contributes to a wider range of other disciplines; and c) it is appreciated outside the field; d) it contains a wider range of available methods for the successful delivery of projects.

2. Literature review

2.1 Project management paradigm

If the project management's field is to progress, explicit understanding of the theoretical basis of project management is necessary, as it provides the opportunity to understand the assumptions, which underpin practice, to question their appropriateness, and then consciously choose an alternative, when it is appropriate to do so. In an article(Pollack, 2007), the author highlighted the relationship between the notion of paradigm and project management, which he concluded that the range of theoretical frameworks being applied in PM research and practice appeared to be expanding, and the field showed a significant level of plurality.

Increasing diversity of theoretical frameworks in the field of Information Systems has been heralded as a healthy sign for research

progress and a sign of maturation of a discipline.

Specially, a strong emphasis on the hard paradigm can also be seen in how the tools and techniques commonly associated with PM have developed.

In fact(Kerzner, 2009), the PM approach is relatively modern. It is characterized by methods of restructuring management and adapting special management techniques, with the purpose of obtaining better control and use of existing resources.

2.2 Project management model

Several project management models have developed over the years. The majority of these epistemological postures are positivism since guidelines, tools, techniques and sometimes skills are established at a general level to be applied in specific projects.

The discipline of project management has its concepts, but their implementations vary from one model to another.

If in theory there is a diversity of models and visions in the discipline of project management, it must be recognized that in practice all these conceptual differences overlap.

Project Management Body of Knowledge (PMBok) (Smyth & Morris, n.d.) Guide is the formal model of project management for a very great many people and enterprises. It is the most simplistic, with a primary focus upon task execution and fails to refer to the management of frontend issues, exogenous factors, strategy or human factors.

PMBok is epistemologically closely associated with positivism, seeking general explanations and solutions for practice, tending to disregard context.

The International Project Management Association (IPMA) Competency Baseline and Association Progres du Management (APM) Body of Knowledge reflect the functionalist framework.

The Japanese BOK is more eclectic, not quite reflecting any of these paradigms. For ISO 21500 (Stellingwerf & Zandhuis, 2013), it is referred to as an informative standard; a guideline that can be defined as a basic conceptual structure to allow homogeneous handling of different business

processes grouped together and increases management discipline. Being a basic reference ISO 21500 is a guideline rather than a method or methodology.

2.3 Project management tools and techniques

A strong emphasis (Pollack, 2007) on the hard paradigm can also be seen in how the tools and techniques commonly associated with PM have developed. PM tools and techniques are predominantly quantitative. For instance, Söderlund identifies ‘‘... that ‘traditional’ project management research is classifiable either as one of ‘optimization’ or as ‘critical success factor’ research ...’’ where the former primarily involves reductionist breakdown techniques, and the latter favors quantitative analysis of large surveys.

Moreover, as the project (Lock, 2016) means doing something new, possibly even something risky or adventurous, which in the business world this usually means creating something that someone else wants and is prepared to pay for. Most projects have targets, which means they have to be build right, within a cost budget, and finished by a certain date. In this case, Project management is simply making sure that all these targets are met, with appropriate tools and quantitative techniques.

Project management tools and techniques have been practiced since early civilization. However, it was not until the 1950s that organizations started to apply project management tools and techniques to complex engineering projects systematically.

Many research has been provided on project management tools and techniques, however, the vast majority of which focuses on particular project management tools or specific project management practice. One of these studies (Besner & Hobbs, 2008) tended to identify general use and usefulness of project management practices. The paper is based on a large-scale survey of 750 experienced project management practitioners. A part of the questionnaire is composed of a series of questions designed to investigate the 70 tools and techniques drawn from the PMBok (2004) guide and completed with definitions by the authors.

However, between 2004 and 2012, many improvements have been made. For PMBok (2012) (Project Management Institute, 2013), other tools were added and others improved or modified, which made the PMI enriched this seventh edition through the criticisms of researchers and the experience of professionals.

2.4 Project management maturity model

The project management methodology (Nicholas & Steyn, 2008) provides a framework and set of structured tasks, tools, and techniques to conceive, define, plan, schedule, budget, track, control, and close out projects. It is the means by which all projects in an organization are managed and performed in a standardized, disciplined, and systematic manner, using recognized best practices.

The degree or extent of capability or competency regarding project management is referred to as “maturity”. The Oxford Advanced Learner’s Dictionary (Pretorius et al., 2012) defines ‘maturity’ as “the state of being fully grown or developed”. When this concept is applied to a project, it could imply a situation where an organisation has standards and procedures in place that would assist it in reaching its objectives. An organisation is mature when it is in a position to deal perfectly with its projects.

The concept (Cooke-Davies & Arzymanow, 2003) of process maturity was born in the Total Quality Management movement, where the application of statistical process control techniques showed that improving the maturity of any technical process leads to two things: a reduction in the variability inherent in the process, and an improvement in the mean performance of the process.

Project management maturity (Nicholas & Steyn, 2008) refers to an organization’s capability or competency in managing projects, and includes the extent to which it employs a methodology and formalized methods for project planning and control, multi-project integration, and continuous improvement. Maturity can be formally measured and assessed using maturity models; a high rating on these models indicates that an organization has achieved a high level of standardization in its project management practices and processes.

Because of many different maturity models, one research (Simangunsong & Da Silva, 2013) is focused on four models for general industry and commonly used.

Capability Maturity Model (CMM) developed by Carnegie Mellon University, and the Software Engineering Institute in 1993) PM Solutions Project Management Maturity Model (PMMM) adapted from the CMM, and the nine knowledge areas of PMI), Project Management Process Maturity (PM) Model developed by Kwak and Ibbs in 2002; d), Project Management Maturity Model (Pro MMM) proposed by PM Professional Solutions Limited. And also the Organizational Project Management Maturity Model (OPM3)(Institute, 2013) developed in 1998 and proposed by the Project Management Institute (PMI). Having achieved a high rating according to a standard maturity model, a company can potentially use that rating to its advantage.

Any model selected(Crawford, 2014) to measure project management maturity must point out a logical path for progressive development. In effect, a good model for the measurement of project management maturity creates a strategic plan for moving project management forward in an organization. In this case, the results of the qualitative content analysis(Albrecht & Spang, 2016) made the differences between some project management maturity models based on multiple criteria.

3. Empirical research

In the context of the development of Algeria and the diversity of projects undertaken in different sectors, awareness of the concept of project management is essential for maintaining this progress trajectory effectively and efficiently because it is the only tool for organizing projects in a rapidly expanding country.

Today, Algeria is in full structural development and in economic effervescence with the creation of a ministry dedicated to start-ups and micro enterprises, which encompasses several projects in different economic and social sectors. Given its importance for our country, this paper tries to highlight the concept of project management maturity during

the period 2007-2019 of projects financed by the Guarantee Fund for Credits to SMEs (FGAR). Funding is crucial and essential for the creation of organizations and their future reputation.

The main objective of the FGAR(*Statistiques | FGAR*, 2020) is to facilitate access to medium-term bank financing in order to support the start-up and expansion of SMEs, by granting credit guarantees to viable commercial banks oriented towards creation and / or development companies.

The evolution of projects (SMEs) within the framework of the FGAR is schematized along different axes and regions. This chronology of the different stages of projects, creation to extension, was established according to information reported by documentary resources published on the official website of the Ministry of Industry currently.

FGAR support for SMEs is presented in graph 1. It reflects the cumulative years of FGAR implementation stages (for example, the number of projects supported in 2019 phase includes the number of projects supported in previous years). During this implementation, the graph reflects the passage of projects from the creation stage to the extension stage.

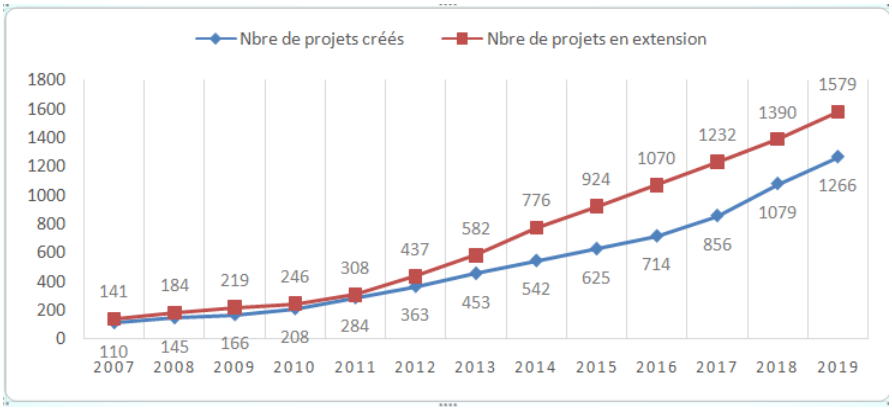
Fig.1.FGAR funding stage per date

Source: www.mdipi.gov.dz/?Bulletin-de-veille-statistique (Consulted 2020-12-15)

It is noted that the cumulative number of financed projects increases from 251 to 2845 SMEs. Graph 2 illustrates the evolution of the cumulative number of expansions of already created SMEs, which reached 1,579, and

the cumulative number of new SMEs created. What is important is that between 2014 and 2017, the cumulative number of extensions was greater than the cumulative number of creations. Which shows the degree of importance to the extension of SMEs following the objectives of Algeria to face the challenges of standardization.

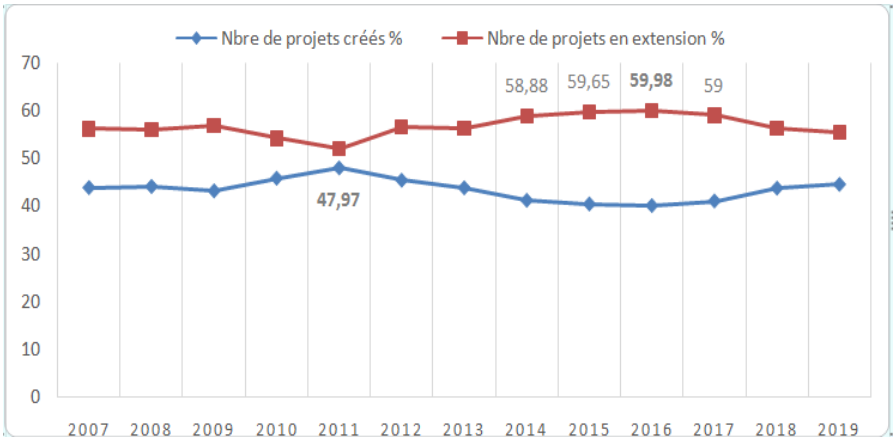
Fig.2. Evolution of cumulative number of projects in extension and creation



Source: www.mdipi.gov.dz/?Bulletin-de-veille-statistique According to the Authors

Graph 3 illustrates the evolution of the SME expansion rate, which reached 59.98%, and the creation rate of new SMEs. What is important is that throughout our study (between 2007 and 2019), the rate of expansion was always higher than the rate of creation.

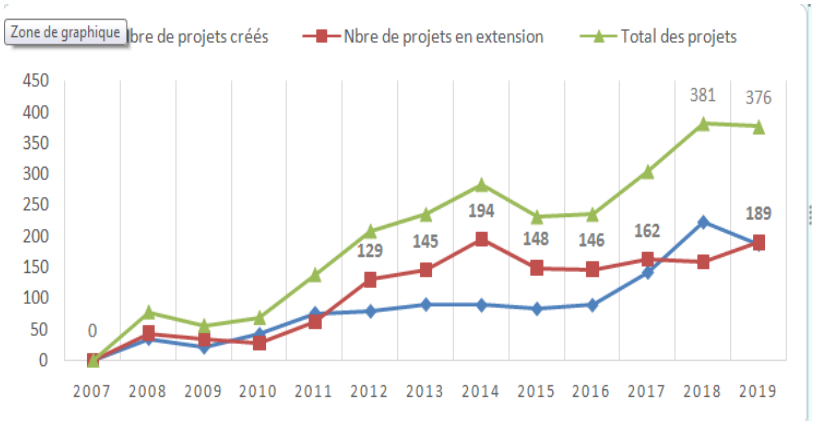
Fig.3.Evolution of extension and creation rate



Source: www.mdipi.gov.dz/?Bulletin-de-veille-statistiqueAccording to the Authors

For more details, Graph 4 illustrates the evolution of the number of extensions of SMEs and new SMEs created. What is important is that between 2012 and 2017, the number of extensions was greater than the number of creations, a very important factor on the evolution and emergence of SMEs to extend their projects.

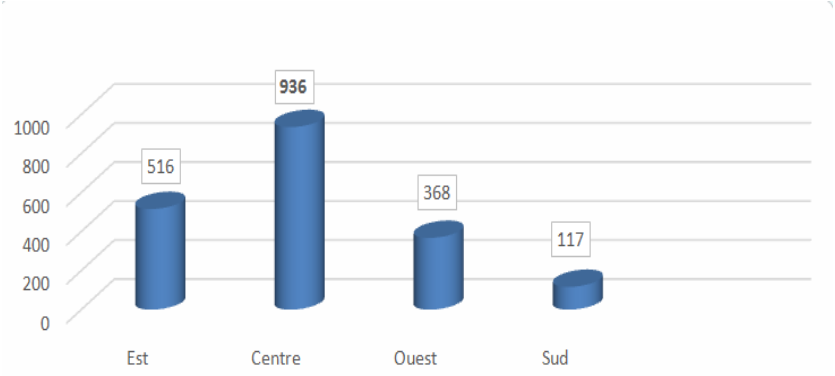
Fig.4.Evolution of number of projects in extension and creation



Source: www.mdipi.gov.dz/?Bulletin-de-veille-statistique According to the Authors

Graph 5 reflects this analysis in a given period (April 2004 to June 2017) according to the regions. There is a difference between the total cumulative numbers of funded projects in each region, where the highest cumulative projects are in the center of 936.

Fig.5.FGAR funding stage per region

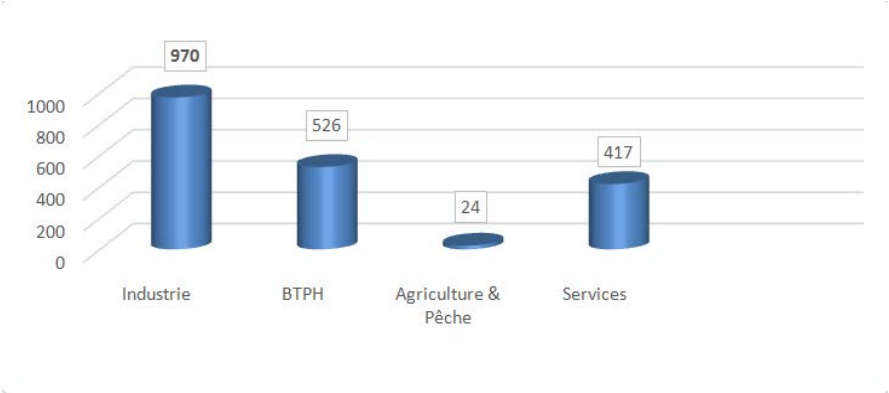


Source: www.mdipi.gov.dz/?Bulletin-de-veille-statistique (Consulted 2020-12-15)

It is clear that funding capacities have been strengthened and monitoring skills have been developed at all levels with the creation of a ministry dedicated to start-ups and microenterprises as well as incubators in all the major cities of the country. The microenterprise, which represents 97% of total SMEs, offers more ability to adapt to changes in demand and the evolution of technologies. It offers more room for the adoption of new managerial methods. The development of SMEs is thus both a vital economic imperative and a strategic opportunity. It plays an essential role in the creation of wealth in the country, with the increase in employment and the evolution of Gross domestic product(*Industrie*, 2020).

Graph 6 reflects another analysis in the same given period (April 2004 to June 2017) according to the activity sectors. There is a difference between the cumulative total numbers of funded projects in each sector, where the highest cumulative projects are concentrated in the industry sector of 970.

Fig.6.FGAR funding stage per activity sectors



Source: www.mdipi.gov.dz/?Bulletin-de-veille-statistique(Consulted 2020-12-15)

Thus, the Fund has facilitated the issuance of guarantees and the monitoring of risks in favor of SMEs making investments in the creation, renovation or extension of the business, or the acquisition of equity interests, as well as ensuring the advice and technical assistance, which are useful measures for evaluating the guarantee systems put in place.

Table 1. Cumulative situation of guaranteed projects by activity April 2004 / June 2017

Activity sector	Number of Projects	%	Amount of Guarantee	%
INDUSTRY	**970**	**50**	**32 151 448 062**	**60**
MINE AND QUARRIES	18	0,9	507 740 665	0,9
STEEL INDUSTRY METAL MECHANICAL AND ELECTRICAL	126	6,5	4 159 239 113	7,8
MATERIALS AND GLASS	163	8,4	6 458 170 860	12,1
CHEMISTRY, RUBBER AND PLASTICS	168	8,7	5 560 604 780	10,4
AGRI-FOOD TOBACCO AND MATCHES	309	16,0	10 866 600 664	20,3
TEXT.BONNET AND CONFECTION	31	1,6	518 244 550	1,0
LEATHER AND SHOES INDUSTRY	7	0,4	204 406 100	0,4
WOOD, CORK, PAPER AND PRINTING	95	4,9	2 264 567 393	4,2
VARIOUS INDUSTRIES	53	2,7	1 611 873 937	3,0
BTPH	**526**	**27**	**10 993 691 363**	**21**
PUBLIC WORKS	289	14,9	6 515 055 539	12,2
BUILDING	220	11,4	4 116 340 135	7,7
HYDRAULIC	17	0,9	362 295 689	0,7
AGRICULTURE/ FISHING	**24**	**1**	**882 180 868**	**2**
AGRICULTURE	4	0,2	70 366 398	0,1
FISHING	20	1,0	811 814 470	1,5
SERVICES	**417**	**22**	**9 466 535 915**	**18**
HEALTH	94	4,9	3 882 493 510	7,3
TRANSPORT	220	11,4	2 893 068 094	5,4
INDUSTRIAL/MAINTENANCE	16	0,8	475 663 183	0,9
TOURISM & LEISURE	59	3,0	1 764 003 723	3,3
NTIC	14	0,7	242 000 279	0,5
COMMUNICATION	8	0,4	152 957 430	0,3
ENGINEERING AND TOPOGRAPHICAL TECHNICAL STUDIES	6	0,3	56 349 696	0,1
TOTAL	**1 937**	**100**	**53 493 856 208**	**100**

Source: www.fgar.dz/portal/fr/statistiques (Consulted 2020-12-09)

Table 2. Cumulative situation of guaranteed projects by sector April 2004 / June 2017

Activity sector	Number of Projects	%	Number of Jobs	%
INDUSTRY	970	50	36 609	59
BTPH	526	27	15 999	26
AGRICULTURE & FISHING	24	1	845	1
SERVICES	417	22	8 335	13
TOTAL	**1 937**	**100**	**61 788**	**100**

Source: www.fgar.dz/portal/fr/statistiques (Consulted 2020-12-09)

Beneficiaries learned to identify sources of funding and to design to expand projects, being aware of the availability of significant amounts, contributing thus to the overall social and economic development.

For graph 6, it represents the cumulative projects of the four priority axes of the FGAR support program until June 2017. The cumulative number of funded projects indicates an increase in the realization of projects in the most dominant industry sector of a number of 970 projects.

For more details, Table 1 shows the funding rate for projects in the various priority axes from 2004 to 2017. We note that the rate of projects supported by the industry axis has risen to 50%. For the BTPH axis, the rate is 27%.

Two very essential factors for the development of the economic infrastructure of a country and the gain of confidence of the society.

It is clear that FGAR financing for SMEs takes into account several eligibility criteria. Therefore, priority is given only to SMEs presenting projects aimed at:

- The manufacture of goods or offers of services that do not exist in Algeria;
- The creation of high added value to the products manufactured;
- Reduction of imports;
- Increased exports;
- The use of natural resources available in Algeria while promoting the

transformation of local raw materials;

- Optimum financing in relation to the number of jobs created;
- Recruitment of young graduates from vocational training centers, technical schools and universities;
- Carrying out projects in regions with a significant labor surplus;
- The development of new skills, especially in the new economy;
- Innovation through technology or know-how.

From all these details, one notices that the notion of project management good practices exists, whether it is in public organizations when approving projects or in implementing organizations. For the latter, creation of a project is only a sign of maturity at the first level and the extension of the created project is also a sign of maturity at the second level, since the details retained contain certain indicators of the support of the FGAR from 2004 to 2019.

In addition, this is only a proof of the experience accumulated in the maturity of project management practices whether for SMEs from different regions and activating in different sectors of activity.

4. CONCLUSION

According to these results, two very good maturity indicators should be studied closely in SMEs that have assumed responsibility for the creation of their projects and its extension within the framework of the development of our country.

It is clear that the notion of project management good practices exists, creation of a project is a sign of maturity at the first level and the extension of the created project is a sign of maturity at the second level, since the details retained contain certain indicators of the support of the FGAR.

This study is only preliminary to further studies because it is noted that much research has been concerned with the financing of projects and the guarantees of the various state aid funds forgotten the management maturity side of the project.

Certainly, according to different studies carried out in the industry sector, a number of organizations have had the opportunity to acquire

international standards of quality management, which should be closely studied.

Finally, it is important to realize that all these aspects initiated or described in this paper should be taken into consideration in order to progress effectively and efficiently towards the evolution, development and integration of SMEs in our development. economic.

At the end, this study aims to encourage other researchers to focus on this aspect in order to highlight the level of maturity of these SMEs and to participate in their evolution, which has a crucial impact on the future support program of state and the complete opening of our country to the international market.

5. References

1. Books

- Crawford, J. K. (2014). *Project Management Maturity Model, Third Edition*. CRC Press.
- Kerzner, H. R. (2009). *Project Management : A Systems Approach to Planning, Scheduling, and Controlling*. Wiley.
- Nicholas, J. M., & Steyn, H. (2008). *Project management for business, engineering, and technology : Principles and practice* (3rd ed). Elsevier Butterworth Heinemann.
- Lock, D. (2016). *Project Management in Construction*. CRC Press.
- Project Management Institute (Éd.). (2013). *A guide to the project management body of knowledge : (PMBOK® guide) ; an American National Standard ANSI-PMI 99-001-2013* (5. ed). PMI.
- Stellingwerf, R., & Zandhuis, A. (2013). *ISO 21500 Guidance on project management—A Pocket Guide*. Van Haren.

2. Journal article

- Albrecht, J. C., & Spang, K. (2016). Disassembling and Reassembling Project Management Maturity. *Project Management Journal*, *47*(5), 18‑35.
- Besner, C., & Hobbs, B. (2008). Project management practice, generic or contextual : A reality check. *Project Management Journal*, *39* (1), 16‑33.

- Cooke-Davies, T. J., & Arzymanow, A. (2003). The maturity of project management in different industries : An investigation into variations between project management models. *International Journal of Project Management*, *21*(6), 471‑478.
- Institute, P. M. (2013). *Organizational Project Management Maturity Model (OPM3®) Knowledge Foundation*. Project Management Institute.
- Pollack, J. (2007). The changing paradigms of project management. *International Journal of Project Management*, *25*(3), 266‑274.
- Pretorius, S., Steyn, H., & Jordaan, J. C. (2012). Project management maturity and project management success in the engineering and construction industries in Southern Africa. *South African Journal of Industrial Engineering*, *23*(3), 1‑12.
- Simangunsong, E., & Da Silva, E. N. (2013). Analyzing Project Management Maturity Level in Indonesia. *The South East Asian Journal of Management*.
- Smyth, H. J., & Morris, P. W. G. (s. d.). An epistemological evaluation of research into projects and their management : Methodological issues. *International Journal of Project Management*, *25*, 423‑436.
- Turner, R., Pinto, J., & Bredillet, C. (2011). The Evolution of Project Management Research : The Evidence from the Journals. *The Oxford Handbook of Project Management*.

3. Internet websites

– *Industrie*. Ministère de l'Industrie. http://www.mdipi.gov.dz/?Bulletin-de-veille-statistique ,(2020, décembre 15).
– Albrecht, J. C., & Spang, K. (2016). Disassembling and Reassembling Project Management Maturity. *Project Management Journal*, *47*(5), 18–35.
– Besner, C., & Hobbs, B. (2008). Project management practice, generic or contextual: A reality check. *Project Management Journal*, *39*(1), 16–33. https://doi.org/10.1002/pmj.20033
– Cooke-Davies, T. J., & Arzymanow, A. (2003). The maturity of project management in different industries: An investigation into variations between project management models. *International Journal of Project*

Management, *21*(6), 471–478. https://doi.org/10.1016/S0263-7863(02)00084-4

- Crawford, J. K. (2014). *Project Management Maturity Model, Third Edition*. CRC Press.
- *Industrie*. (2020, December 15). Ministère de l'Industrie. http://www.mdipi.gov.dz/?Bulletin-de-veille-statistique
- Institute, P. M. (2013). *Organizational Project Management Maturity Model (OPM3®) Knowledge Foundation*. Project Management Institute.
- Kerzner, H. R. (2009). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. Wiley.
- Lock, D. (2016). *Project Management in Construction*. CRC Press.
- Nicholas, J. M., & Steyn, H. (2008). *Project management for business, engineering, and technology: Principles and practice* (3rd ed). Elsevier Butterworth Heinemann. http://gen.lib.rus.ec/book/index.php?md5=219f09ea244b855559fb63c6702ed4e2
- Pollack, J. (2007). The changing paradigms of project management. *International Journal of Project Management*, *25*(3), 266–274. https://doi.org/10.1016/j.ijproman.2006.08.002
- Pretorius, S., Steyn, H., & Jordaan, J. C. (2012). Project management maturity and project management success in the engineering and construction industries in Southern Africa. *South African Journal of Industrial Engineering*, *23*(3), 1–12.
- Project Management Institute (Ed.). (2013). *A guide to the project management body of knowledge: (PMBOK® guide) ; an American National Standard ANSI-PMI 99-001-2013* (5. ed). PMI.
- Simangunsong, E., & Da Silva, E. N. (2013). Analyzing Project Management Maturity Level in Indonesia. *The South East Asian Journal of Management*. https://doi.org/10.21002/seam.v7i1.1521
- Smyth, H. J., & Morris, P. W. G. (n.d.). An epistemological evaluation of research into projects and their management: Methodological issues. *International Journal of Project Management*, *25*, 423–436.
- *Statistiques | FGAR*. (2020, December 9). Fonds de Garantie Des Crédits Aux PME. https://www.fgar.dz/portal/fr/statistiques

– Stellingwerf, R., & Zandhuis, A. (2013). *ISO 21500 Guidance on project management—A Pocket Guide*. Van Haren.
– Turner, R., Pinto, J., & Bredillet, C. (2011). The Evolution of Project Management Research: The Evidence from the Journals. *The Oxford Handbook of Project Management*. https://doi.org/10.1093/oxfordhb/9780199563142.003.0004