

Diagnosing the Objectives of Algeria's Ministry of Higher Education and Scientific Research Portfolio (2022-2025)

تشخيص أهداف محفظة برامج وزارة التعليم العالي والبحث العلمي في الجزائر للفترة (2022-2025)

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Abstract:

This study aims to diagnose, the objectives of the ministry of higher education and scientific research's program portfolio for the period (2022-2025), and evaluate their requirements, adopting a descriptive analytical approach to determine how strategic objectives were established according to Organic Law 18-15, and to analyze the evolution of credit balances along with their justification and measurement of outcomes through established performance indicators.

In conclusion, the study found that program objectives are shaped based on expected outcomes and available financial appropriations. Achieving these objectives requires effective management of financial and human resources, with each program manager defining goals according to a specific strategy, The Ministry of Higher Education has relied on monitoring and measuring the outcomes of its portfolio based on indicators of efficiency and effectiveness (Digitization of pedagogical services), quantitative indicators (pedagogical supervision), and qualitative indicators (research projects and formation).

Key words: portfolio of programs, strategic objectives, organic law, credits, performance indicators.

ملخص:

تهدف هذه الدراسة إلى تشخيص أهداف محفظة برامج وزارة التعليم العالي والبحث العلمي للفترة (2022-2025) وتقييم متطلباتها، فتم الاعتماد على المنهج الوصفي التحليلي لتحديد كيفية وضع الأهداف الاستراتيجية حسب القانون العضوي 15-18، وتحليل تطور أرصدة الاعتمادات مع تبريرها وقياس نتائجها من خلال مؤشرات الأداء الموضوعة.

خلصت الدراسة في النهاية أن الأهداف البرمجية يتم تشكيلها بناءً على النتائج المتوقعة والاعتمادات المالية المتاحة، وتحقيقها يتطلب تسيير الموارد المالية والبشرية بفعالية، وكل مسؤول برنامج يحدد وفق استراتيجية محددة، فقد اعتمدت وزارة التعليم العالي في تسيير محفظتها على متابعة نتائجها وقياسها استناداً لمؤشرات النجاح والفعالية (رقمنة الخدمات البيداغوجية بروغرس)؛ مؤشرات الكمية (التأطير البيداغوجي) ومؤشرات النوعية (مشاريع البحث والتكوين).

الكلمات المفتاحية: محفظة البرامج؛ القانون العضوي 15-18؛ الأهداف الاستراتيجية؛ الاعتمادات؛ مؤشرات الأداء.

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1. INTRODUCTION

The new method of preparing the program budget by the ministerial departments, in accordance with its needs and objectives already established, it has been able to employ public resources more efficiently and effectively, taking into account performance indicators. It also allows each ministerial department to plan and program operations under its responsibility. Considering that the program includes a range of processes appropriate to the overall objectives and directives of the Government, with appropriate financial coverage of the activities of the ministries. The Organic Law 18-15 of 2 September 2018 and its regulatory provisions are contained in legal articles in the preparation of the ministerial portfolio, which stipulate that the funds recorded under the title of the program should be allocated to one or several subprograms, it also prepares the programming of funds in accordance with the terms of reference of each ministry or public institution through the appropriation programming document.

The Ministry of Higher Education is an ideal example of running its ministerial portfolio in accordance with the program budget and its obligations to achieve pre-established objectives in accordance with the financial allocations distributed, which could result in a transfer, or a movement. In doing so, the priorities are confirmed and the major trends identified by the State, which should be consistent with the performance indicators set out in the medium-term budget program, are enshrined.

As such, the following query was used to formulate the research problem:

How are the objectives of MESRS's program portfolio shaped according to Organic Law 18-15, and to what extent do they align with performance indicators and budget appropriations?

Hypotheses: we will guide our research according to the following hypotheses:

- ✓ Program objectives are formed in line with expected outcomes and available financial credits.;
- ✓ The implementation of performance indicators ensures better monitoring and alignment with strategic goals.

The objectives of the study: this study aims to achieve the following goals:

- ✓ Clarifying the relationship between programs, objectives, and performance indicators;
- ✓ Explaining how to manage the portfolio of the Ministry of Higher Education in accordance with the organic law 18-15;
- ✓ Analyzing programs expenditures;
- ✓ Justifying how the financial and human resources of the portfolio enable the achievement of the strategic objectives set for the period 2022-2025.

Literature review: Literature Review The theoretical foundation of this study draws on public sector performance theory and program budgeting models, notably:

- ✓ In the 2022 article titled "Balancing accountability and autonomy: the impact and implications of public steering mechanisms in higher education", published in the Journal of Public Budgeting, Accounting & Financial Management, Tomi K. Kallio, Kirsi-Mari Kallio,

and others explore the complex relationship between institutional autonomy and the accountability demands imposed by public steering mechanisms in Finnish higher education. The study focuses on how performance-based funding models, as instruments of state control, influence the strategic freedom of universities. Drawing on institutional complexity and contradiction theory, the authors conducted a detailed empirical investigation of Finnish universities, revealing that while such mechanisms are designed to increase transparency and efficiency, they often lead to reduced autonomy and increased administrative burden. The findings underscore that excessive reliance on performance metrics can undermine the academic mission and self-governance of institutions. The study concludes that for governance systems to be effective and sustainable, they must strike a careful balance between accountability and institutional independence¹;

- ✓ A comprehensive international perspective was offered by the OECD (2018) in its report *Performance Budgeting in OECD Countries*. This study sought to evaluate the application and evolution of performance budgeting across member countries. It found that while most OECD countries have adopted results-oriented budgeting frameworks, the depth and effectiveness of implementation vary considerably. The report emphasized the importance of supportive legal frameworks, advanced financial information systems, and institutional readiness in achieving successful reform²;
- ✓ Kettunen and Kallio (2019) presented a comparative analysis in the *International Journal of Public Administration*, titled *Public Sector Performance and Budgeting: A Comparative Study*. The study questioned how budgeting practices influence public sector performance across different national contexts. The results indicated that the relationship between budgeting and performance is significantly influenced by political, cultural, and institutional environments. Thus, the study warned against a one-size-fits-all approach and highlighted the importance of context-specific adaptations³.

The reviewed literature highlights important insights into performance-based budgeting and governance reforms, especially within Algeria. However, most studies remain focused on macro-level analysis, with limited attention to how specific program portfolios translate strategic goals into measurable outcomes—particularly in the higher education sector.

This article addresses that gap by providing an in-depth diagnostic of the objectives set within the program portfolio of Algeria's Ministry of Higher Education and Scientific Research for 2022–2025. Its added value lies in its sector-specific focus, empirical basis, and practical relevance in evaluating how public finance reforms function at the programmatic level—offering both academic and policy-level contributions.

Study methodology: In order to achieve the desired purpose of this research, A descriptive analytical approach was adopted. Data were gathered from official reports by MESRS (2022–2025), Organic Law 18-15, and executive decrees. Key documents include the Report on Priorities and Planning and the Performance Reports (RPP). Data were analyzed to trace the formulation of objectives, resource allocations, and performance tracking mechanisms.

2. the relationship between programs, objectives and indicators

The State budget based on programs reflects major sectoral policies with guidance, measurement and improvement of the effectiveness of the implementation of the State budget for each program. Having defined a performance methodology that includes the program strategy and performance targets that emanate from this strategy, as well as performance indicators that enable measurement of achievement of the desired objectives. According to Article 28 of Organic Law 18-15 relating to finance laws, State budgetary charges are grouped according to the following classifications, by: Activity; Economic nature of expenditure; Major functions of the State; Administrative entities. And The classification by activity of State budgetary charges is as follows⁴: The program portfolio; The program; The subroutine; The action; The sub-action, if applicable research strategy.

2.1. The program portfolio:

It is a group of programs placed under the responsibility of a minister or official of a public institution or body, which in turn is divided into sub-programs and activities to implement a specific public policy⁵.

2.1.1. The program: is the unit for the implementation of funds and constitutes the framework for the practical implementation of State policies. A program brings together all the credits contributing to the achievement of a specific mission falling within one or more services of one or more ministries or public institutions and defined according to a coherent set of precise objectives.⁶

From the previous definition, we conclude that the program is:

- The expression of a public policy, implying a strategy;
- A coherent set of systems and measures serving this strategy;
- Placed under the responsibility of state agents;
- Pursuing specific objectives, measured by performance indicators;
- Having adequate means.

As an update procedure, the minister responsible for the budget establishes the forecast list of programs selected, by portfolio. This list is submitted for approval to the Prime Minister, at the latest, by the end of February of the year preceding the budget year in question⁷.

2.1.2. The subprogram: is a budgetary subdivision of a functional type program, used in the construction of the program budget and cross-referenced with the nature of the expenditure.⁸

The following table will show us an example of the program portfolio of the Ministry of Higher Education and Scientific Research:

Table 1. the program portfolio's ministry of higher education and scientific research

portfolio	The ministry of higher education and research scientist			
programs	<u>Program 1:</u> Teaching and higher education	<u>Program 2:</u> Scientific research and development technological	<u>Program 3:</u> Student life	<u>Program 4:</u> General administration
subprograms	<u>Subprogram 1.1</u> First and second cycles of education	<u>Subprogram 2.1</u> Research and development	<u>Subprogram 3.1</u> Student assistance	<u>Subprogram 4.1</u> Ministry management
	<u>Subprogram 1.2</u> Formation in the third cycle	<u>Subprogram 2.2</u> Technological innovation	<u>Subprogram 3.2</u> Study and living conditions of students	<u>Subprogram 4.2</u> Administrative support

Source: The General direction of budget, <https://dgb.mf.gov.dz/ar/>

The Responsible manager of this portfolio is: the minister of higher education and research scientist, the minister is therefore the source of budgetary power in his portfolio. Under his authority are placed: responsible for the ministerial financial function who may have a different name depending on the organization charts; or program managers; Managers of program subdivisions; The decentralized services having the status of authorizing officer at the time of publication of the implementing decrees continuing to exercise their role.

According to the table above, the Program manager (program 01: Teaching and higher education) is Director General of Education and formation “Mr. SAIDANI Boualem”;⁹

- **Sub-program 1:** 1st and 2nd teaching cycles: Responsible for the action 1(Teaching): Director of first and second cycle teaching” Mr. AMARA Sifeddine”, and the Responsible for the action 2 (Training): Director of higher education “Mr. BOUKEZZATA Djamel”;
- **Sub-program 2:** Postgraduate formation: Responsible for the action 3 (Research – formation): Director of doctoral training “Ms. BOUALLOUCHE Rachida”.

Program credits are distributed among one or more subprograms and by title. The subprogram is a functional type subdivision of the program. The action and possibly the sub-action is an operational subdivision of the program.

2.2. objectives and indicators:

The program is contextualized and linked to policies, which are organized according to selected priorities identified as desired outcomes. The objectives should be clear, representative and

consistent with the major program themes, measurable by performance indicators for each financial year within a three-year framework, and the number should be defined and aligned.

2.2.1. smart objectives: The target has several definitions of which we mention:

“The objective is a practical end to a theoretical beginning to achieve the desired goal.”¹⁰

“The objective is a set of final results that organizations seek to achieve”.¹¹

The smart objectives are a global standard used in different areas, allowing for a clear description of the objectives to be expressed, it is easy to understand the objectives and thus achieve results. His Characteristics are:

-Specific: The specific objective must be directly related to the work of the person responsible for achieving the goal, and it can also be qualified simply, to be easy to understand, clear, precise, and understandable by the person charged with achieving it in order for it to be effective;¹²

-Measurable: The measurable objective must be quantitative. To achieve the goal, defining the threshold is necessary to know the level that must be reached. It is not possible to choose a goal that can-not be measured or determined, given that measurement is necessary to evaluate the means necessary to achieve the objective

-Acceptable and Ambitious: sometimes we use the term “investigable”, the acceptable goal is sufficiently high and ambitious, as it represents a challenge to serve as catalyst for its achievement. in addition, the objective must be achievable and reasonable, so that it is more readily accepted by all those involved

-Realistic: a realistic objective is where the threshold for realism is defined, meaning the threshold for which the challenge is a catalyst for the largest number of participants.

-Time-bound: the time-bound target is time-bound, ending and precise terms, such as “in five months or a year”, the use of vague phrases such as “as soon as possible” should not be used.

In order for objectives to be numerically defined and compatible, they must have the ability to structure and give normal meaning to tasks, to be coherent and sufficiently mobilized, in order to conform to performance indicators and results, including ensuring that they are not limited to secondary, side or vague objectives.

2.2.2. indicators of performance:

It is a numerical representation that allows the degree of achievement of the objective to be measured with a high degree of objectivity, a variable that allows information on each stage of the project to be provided to assist in making the appropriate decision.¹³

The indicator is a quantitative or qualitative representation that can be calculated to measure the extent to which a specific target has been achieved and the objective assessment of the level of performance has been made, with several types of compliance in the figures; rates of progress; and changes in position.¹⁴

The indicators are not an end in themselves, but their interpretation is the most important, and follow-up to the indicator according to a timetable will allow for monitoring the repertoire of past achievements and comparing them with the desired values of the indicator¹⁵. The next table shows a reference track for indicators over a three-year period:

Table 2. Monitoring the indicator according to the timetable

statement	Previous achievements			Year of D.V	The desired values		
	Y-3	Y-2	Y-1		Y+1	Y+2	Y+3
Indicator1							
Indicator2							

Source: By the researchers

Indicators for a single objective, quantifiable according to an accurate methodology, should be available to the public, this is to set the target of the program for the year¹⁶, and to draw a reference path over three years, plus measuring achievement of objectives.

There are specifications required in performance indicators, including¹⁷: relevance, meaning and value; be simple, understandable, measurable and comparable; few in 3 or 4 indicators (to be followed up); to be a credible, verifiable and realistic; be stable for a reasonable period and do not change rapidly (between 4 and 5 years).

We'll explain this through an example of objectives and indicators for the ministry of higher education's programs:

Table 3. objectives and indicators for the ministry of higher education's programs

Program1 : Teaching and higher education		Program 3: Student life	
Objective 1.1: Enhance university governance	Indicator1.1.1: graduates annually at rate of 16 or more	Objective 3.1: Improving the quality of university services	Indicator3.1.1: Expenses/cost (scholarship, transportation, food) for each student
	Indicator1.1.2: the number of professors in the professorial category		Indicator3.1.2: student dropout rate from poor backgrounds
	Indicator1.1.3: the number of professors benefiting from formation		
Objective1.2: style of	Indicator1.2.1: content	Objective 3.2:	Idicator3.2.1:

hybrid teaching (in-person/ remote)	creation pedagogical online	enhancing student health in the university environment and developing sports and scientific activities	quality/ cost residence for each student
	Indicator1.2.2: Establish an appropriate legal framework		Indicator3.2.2: Satisfaction rate of students
Objective1.3: improving the professional integration of students	Indicator1.3.1: employment rate of young graduates		
	Indicator1.3.2: unemployment rate of young graduates		
Program2: Scientific research and development technological		Program 4: General administration	
Objective2.1: enhance research outcomes and technological development	Indicator2.1.1: the number of filed patents	Objective 4.1: ensuring the management and coordination of ministerial activities	Indicator4.1.1: degree of achievement of the objectives set for the year
	Indicator2.1.2: the number of implemented national research programs		
Objective2.2: promoting participation in scientific research	Indicator2.2.1: number of label incubators	Objective 4.2: ensuring the support function of the ministry's structures	Indicator 4.2.1: degree of coverage of year structure needs
	Indicator2.2.2: number of startup companies		

Source: The General direction of budget, <https://dgb.mf.gov.dz/ar/>

Through the illustrated example above, the relationship between the program, the objectives and performance indicators must be strategically sequenced, the strategy should include an overview of the program's main features, develops the framework provided by guidance and programming regulations, apart from the economic and social background, taking into account the global and local framework, the strategy also remind the choices made by the authorities in establishing the framework and the broad approaches that may be used to create strategies and prioritize current issues¹⁸. It is a thorough strategy that describes how to carry out the programs, objectives, and mission.

We conclude that there is no program without strategic objectives, no targets without justified, quantifiable and quantifiable indicators.

3. Managing credits according to the objectives and indicators of the MESRS's programs (2022-2025)

The credits are allocated by program, or by allocation for unassigned credits ¹⁹. We will justify how the financial and human resources of the portfolio over the horizon 2022-2025 enable the achievement of the strategic objectives set for the period.

3.1. Justification of the planned credits for the period 2021-2025

The following table shows us the evolution of sector aggregates at the Ministry of Higher Education and Scientific Research for the period under study:

Table 4. Evolution of sector aggregates (2021-2025)

	2021	2022	2023	2024	2025
Total student staff	1.669.000	1.645.000 -24.000 (let It Be 1,44%)	1.724.000 +79.000 (let It Be 4,80%)	1.826.000 +102.000 (let It Be 5.91%)	1.826.000 +102.000 (let It Be 5.91%)
PhD and resident staff	75.000	75.000	75.000	75.000	75.000
Newly enrolled (Bachelor's degree holders)	345.872	319.000	300.000	300.000	300.000
Outgoing (Graduates)	394.000	425.000	418.000	400.000	400.000
Newly enrolled in Master's 1	242.591	222.645	200.000	200.000	200.000
Faculty members count (calendar year)	66.477 Consider an interval of 1/25	68.542 Consider an interval of 1/24	74.957 Consider an interval of 1/23	83.000 Consider an interval of 1/22	83.000 Consider an interval of 1/22
Education al seats	1.427.200	1.455.300	1.508.800	1.562.300	1.562.300
Number of beds	424.000	438.000	452.000	467.000	467.000

Source: Ministry of Higher Education and Scientific Research (2023), Report on priorities and planning, page 6.

In order to fulfill its missions, the higher education sector, endowed with a significant network of higher education and scientific research institutions, is tasked, within the framework of a national strategy, with meeting the needs of society in the fields of higher education, scientific and technological research, the valorization of research results, the production and dissemination of knowledge, as well as the promotion of culture and the dissemination of scientific and technical information.

We note from this table that the number of students decreased by 24000 from the year 2021 to the year 2022, this is due to the covid-19, the number will rise again in 2023, and it is expected to increase in 2024 and 2025. The number of students accommodated during the 2020-2021 academic year was 491,250, representing a rate of 29.77% of the total enrollment, while the theoretical capacity of functional university residences is approximately 612,222 beds.

For the support of 1,645,000 students in 2022 and the continuous increase in students, the ministry took several measures: The opening of 2,392 budgeted positions for the integration of employees under the Professional Integration Assistance Scheme (DAIP); The establishment of three (03) new higher schools (02 in Saharan agronomy in Adrar and El Oued, and one in advanced technologies in Algiers-Sidi Abdallah); The receipt of 28,600 educational spaces; The receipt of 16,500 accommodation beds; The receipt of accompanying infrastructure.

3.1.1. The program1(Teaching and higher education):

We will summarize it in the following table:

Table 5. Expenditures of program 1 by title and type of responsibility center for the year 2023 (in DZD)

Responsibility center type	Title1: Expenses of staff	Title 2: expenses of operation of services	Title 3: expenses investment	Title 4: transfer expenses	total
Central services	139 600 790	220 183 000	11396733000	500 000	11 757 016 790
Decentralized services					
Organizations supervision	275684300000	30742700000			306 427000000
Territorial bodies			20851000000		20851000000
Total expenses	275823900790	30962883000	32247733000	500 000	339035016790

Source: Ministry of Higher Education and Scientific Research (2023), Report on priorities and planning, page 18.

Through the appropriations shown in the table, its increase in the year 2023 can be explained as follows:

- **Personnel:** The evolution of personnel expenses is notably attributed to the continuous increase in employee costs (advancements, promotions, upgrading of allowances...) and the maintenance of the pedagogical supervision ratio following the evolution of the student body."

- **Operation of the services:** The evolution in operating expenses for services is notably to: The continuous increase in the number of students; The creation of new establishments and The operating credits allocated for the new university structures received.

- **Investments:** The evolution of Investments expenses is linked to the maintenance and rehabilitation of structures, existing universities, the registration of the creation of new educational places as well as the financing of the remainder of ongoing projects.

- **Transfers:** The evolution of transfers from the higher education and training program is due to the taking into account responsibility for expenses linked to student flows among other things; social security contributions, activities scientific, cultural and sporting, internships in a professional environment, study allowances, consequences of the social aspect arising from the main missions of the sector, teaching and research.

3.1.2. The program 2 (scientific research and technological development):

We will summarize it in the following table:

Table 5. Expenditures of program 1 by title and type of responsibility center for the year 2023
(in DZD)

Responsibility center type	Title1: Expenses of staff	Title 2: expenses of operation of services	Title 3: expenses investment	Title 4: transfer expenses	total
Central services	237323600	8035282 000	2388791 000	40000000	1070139600
Decentralized services					
Organizations supervision	9708120000	28300000	-	1050380000	10786800000
Territorial bodies					0
Total expenses	9945443600	8063582000	2388791 000	109038000	21488196600

Source: Ministry of Higher Education and Scientific Research (2023), Report on priorities and planning, page 109.

Based on the numbers in the table above, we will present the most important justifications for the Program 2 expenditure in 2023:

- **Personnel:** The evolution of personnel expenses is notably attributed to the continuous increase in employee costs²⁰ (advancements, promotions, upgrading of allowances...)

- **Operation of the services:** The evolution in operating expenses for services is notably attributed to the increase in prices.

- **Investments:** The evolution of investment expenditure is linked to the maintenance and rehabilitation of infrastructure structures research, as well as taking charge of the creation of new research entities and also the financing of the remainder to carry out current projects.

- **Transfers:** The evolution of transfers from the higher education and training program is due to the assumption of related expenses mainly to the financing of research centers.

3.1.3. The program 3 (student life):

The following table illustrates the expenditures of this program:

Table 6. Expenditures of program 3 by title and type of responsibility center for the year 2023
(in DZD)

Responsibility center type	Title1: Expenses of staff	Title 2: expenses of operation of services	Title 3: expenses investment	Title 4: transfer expenses	total
Central services	58779280	4456 000	1543137 000	40000000	1646372280
Decentralized services					
Organizations supervision	38355184000	11109744000	-	84435072000	133900000000
Territorial bodies			17024532000	-	17024532000
Total expenses	38413963280	11114200000	18567669000	84475072000	152570904280

Source: Ministry of Higher Education and Scientific Research (2023), Report on priorities and planning, page 121.

from this table we set the justifications of Program's 3 expenditure by title and type of responsibility center year 2023:

- **Personnel:** The evolution of personnel expenses is notably attributed to the continuous increase in employee costs (advancements, promotions, upgrading of allowances...), the formation of administrative staff and specialized supervisory staff (cooks, plumbers).

- **Operation of the services:** The change in operating expenses for services is due to the commissioning of new infrastructure of university works as well as the increase in the number of students supported, in addition of the sector's strategy aimed at improving the quality of university services (maintenance of kitchen equipment...)

- **Investments:** The evolution of investment expenditure is linked to the maintenance and rehabilitation of infrastructure structures of works existing universities, the renewal of equipment (bedding, kitchen equipment, etc.) and the creation of new cultural and sports infrastructures, and also the financing of the remainder to carry out current projects.

- **Transfers:** The evolution of transfers from the student life program is due to the coverage of expenses related to student flows among others; scholarships, catering, transport, scientific and cultural activities.

3.1.4. The program 4 (general administration):

The following table illustrates the expenditures of this program:

Table 7. Expenditures of program 4 by title and type of responsibility center for the year 2023
(in DZD)

Responsibility center type	Title1: Expenses of staff	Title 2: expenses of operation of services	Title 3: expenses investment	Title 4: transfer expenses	total
Central services	536360930	143373 000	51500 000	731233930	2752824860
Decentralized services					
Organizations supervision					
Territorial bodies					
Total expenses	536360930	143373 000	51500 000	731233930	2752824860

Source: Ministry of Higher Education and Scientific Research (2023), Report on priorities and planning, page 140.

To justify the program expenses we will explain this in detail as follows²¹:

- **Personnel:** The evolution of personnel expenses is notably attributed to maintaining the teaching supervision rate following the evolution of the student bod as well as taking charge of the advancement and promotion of the active staff.

- **Operation of the services:** The change in operating expenses for services is due to the

continuous increase in the number of students; The creation of new establishments; Operating credits allocated for new university structures received; the continuous increase in employee costs (advancements, promotions, upgrading of allowances...)

- **Investments:** The evolution of investment expenditure is linked to the maintenance and rehabilitation of infrastructure structures of works existing universities, the registration of the creation of new educational spaces and also the financing of the remainder to carry out current projects.

- **Transfers:** The evolution of transfers from the higher education and training program is due to the coverage of expenses related to student flows among others; social security contributions, activities scientific, cultural and sporting, internships in a professional environment, study allowances, consequence of the social aspect arising from the main missions of the sector, teaching and research.

3.2. Analysis of performance objectives and indicators for the period 2022-2025:

The indicators and strategic objectives of the Ministry of Higher Education and Scientific Research for the period 2022-2025 are linked to the current situation and government directives, and we will detail them according to the ministry's programs, which are the subject of study:

3.2.1. The program 1 (Teaching and higher education):

Regarding higher education, the sector is responsible for providing education at three levels. The first cycle awards a bachelor's degree, the second cycle awards a master's degree, and the third cycle awards a doctorate. In terms of scientific research, the sector is responsible for ensuring the flourishing of scientific research and technological development, including university scientific research. In the following table, we will clarify the strategic objectives of the Teaching and higher education's program based on performance indicators for the period 2022-2025:

table 8. Objectives and Indicators of program 1(period 2022_2025)

Objectives	Indicators of performance (07)	current value	(Measure)	Date	Target Value	Target values per exercise			
						2022	2023	2024	2025
1. Improvement of the quality of supervision pedagogic	1.1 Number of teachers with doctorates	66 %	%	2021	90%	70%	80%	90%	90%
	1.2 Number of Magistral rank teachers	40 %	%	2021	60% of Magistral rank	45%	53%	60%	60%
	1.3 Overall educational supervision rate	1 for 25	1 teacher/ Number of students	2021	1 teacher for 22 students: 1/ 18 in ST 1/25 in SSH	1/24	1/23	1/22	1/22
2. Redesigning teaching methods and strengthening training in science and technology.	2.1 Number of courses provided online (L3 and Master)	0,8%	%	2021	20 % minimum of formation in social sciences and humanities in L3 and Master	0,8	3%	6%	6%
	2.2 Number of new baccalaureate graduates oriented towards science and technology	38%	%	2021	Balance student numbers between the major field of human sciences and that of science and technology	40%	45%	50%	50%
	2.3 Number of students enrolled in engineering courses per year	9%	%	2021	Increase the number of students enrolled in engineering courses by 50% each academic year	11%	13%	15%	15%
	2.4 Numbre of courses digitized and put online	800	Numbre of courses	2021	Increase the number of courses posted online by 100 %	1200	1400	1600	1600

source: Ministry of Higher Education and Scientific Research (2023), Report on priorities and planning, page 16

Comments for each indicator:

-The number of doctorate-holding teachers: Since the sector's action plan is primarily focused on quality, increasing the rate of supervision in magisterial level instruction is vital, and as a result, work on the one hand, to give doctoral theses priority in hiring, and on the other, to make sure assistant professors with magister diplomas have adequate support so that by 2024, the greatest number of them are supported.

-The number of Magistral levels teachers: Apart from the means by which educators might motivate themselves to publish their theses in scholarly publications, their standing and rewards for incorporating research labs and submitting research projects, by offering a dedicated digital platform, the ministry is taking steps to streamline the application process for the grades of Lecturer A and Professor.

-Overall teaching supervision rate: To move closer to the universal norm while still taking into account the steady increase in the number of students, the existing average supervision rate of one teacher-researcher for every 25 students must be continuously improved. Considering the industry's trends and prospects for PhD training, the targeted goal can be attained by allocating the ensuing budgeted slots. Reaching this objective will undoubtedly help to reduce the number of part-time instructors, which will enhance the standard of higher education.

- Number of courses provided online (L3 and Master): This completely online (remote) training mode is one of the main missions of the University of Continuing Education, with a view to the transform into an Open University (Algerian Open University (AOU)) and responsible for providing training in disciplines professional training provided exclusively remotely. This future university will strengthen the capacities of the sector in this mode of training which is perfectly suited to a segment of our society, as practiced in several countries around the world.

-Number of new baccalaureate graduates oriented towards science and technology: Rebalancing the number of university graduates between the two primary fields of Human Sciences and Social and Technology is necessary to support the nation's new economic dynamic. This objective is set for 2024. To do this, the sector has already created several higher education institutions of engineers, to the opening of new courses dedicated to technology and proposed in a draft decree the reintroduction of training engineers in universities. This new vision needs enhancing the capabilities of institutions of higher learning by significant measures.

-Number of students enrolled in engineering courses per year: The orientation system for new baccalaureate graduates has been adapted to this measure from the 2022-2023 school year. New engineering courses are being finalized and this action will be continued for years to come.

3.2.2. The program 2 (scientific research and technological development):

The following table outlines the objectives of this program and performance indicators for the study period:

table 9. Objectives and Indicators of program 2 (period 2022_2025)

Objectives	Indicators of performance (24)	current value	Measure	Date	Target Value	Target values per exercise			
						2022	2023	2024	2025
1. Improving the performance of scientific research and technological development	1.1 National research projects executed	nothing	Numbre	2021	150 per year	150	150	150	150
	1.2 Tamayouz Laboratories	20	Numbre	2021	20 Tamayouz Laboratories /year	20	20	20	20
	1.3 laboratories, units and centers created	19 EPST 43 units 1.661 laboratories	Numbre	2021	210 entities over 3 years	50	80	80	80
	1.4 Thematic networks created	nothing	Numbre	2021	8 out of 3 years	2	3	3	3
	1.5 Thematic projects	nothing	Numbre	2021	150 out of 3 years	0	75	75	75
	1.6 Incubators create incubated projects	14 67	Numbre	2021	28 incubators	28 80	28 90	28 100	28 100
	1.7 Researchers involved in economic companies in research development	184	Numbre	2021	1000 researchers involved over 3 years	300	300	400	400
	1.8 Promotion of intellectual property, in particular patents for inventions	25	Numbre	2021	25 filed patented/year	25	25	25	25
2. Improving the visibility of scientific and technical information	2.1 Promotion of national scientific journals in selective databases	870	%	2021	90	30	30	30	30
	2.2 Algerian Research Network, ARN	2 118 10 - 100 Mb/s	promotio n	2021	2 150 /year 100 - 1000Mb/s/y	2150 100 - 1000 Mb/s	2150 100 - 1000 Mb/s	2150 100 - 1000 Mb/s	2150 100 - 1000 Mb/s
	2.3 SNDL National Online Documentation System	16 221999	operators Number of establish ments connecte d flow provided	2021	16 out of 3 years plus 5% per year	20 235000	20 250000	20 260000	20 260000
	2.4 implement actions to promote research results and scientific and technological dissemination	6	Numbre	2021	Event/year	6	8	10	10

Source: Ministry of Higher Education and Scientific Research (2023), RPP, page 106.

Comments for each indicator:

- National research projects executed:** Themes and number of projects chosen by decree, in accordance with national priorities: food security, citizen health and energy security,
- **Tamayouz Laboratories:** The Tamayouz program aims to encourage the best laboratories based on their periodic evaluation and production.
- **laboratories, units and centers created:** The Forecast of the number of entities to be created is determined on the basis of the entities created in the last three years, knowing that the priority is given to institutions that do not have research laboratories and prioritize laboratories in technologies.
- **Thematic networks created:** This forecast is based on the recommendations contained in the white books prepared by the sector in the areas of food security, energy security, artificial intelligence, microelectronics and humanities and social sciences.
- **Thematic projects:** Projects to be launched in consultation with the different sectors after assessment of needs by priority.
- **Incubators create incubated projects:** The estimated number of incubators to be established is based on the applications filed and communicated in the government action plan. The number of incubated projects is automatically influenced by the increase in the number of active incubators as they play a crucial role in the maturity of innovative projects.
- **Researchers involved in economic companies in research development:** The number of researchers involved in the enterprise is directly related to the amount of re-search entities to be created, the PNR and socio-economic projects and the mixed teams to be launched during this period
- **Promotion of intellectual property, in particular patents for inventions:** the number of patents to be filed is determined by taking into account the statistics of the last 3 years. The target value represents a minimum number of patents to be filed during this period.
- Promotion of national scientific journals in selective databases:** Forecasts based on statistics from scientific journals in different categories
- Algerian Research Network, ARN:** service provided by two national operators, Connection of new establishments + Increase inflow rates
- SNDL National Online Documentation System:** Order contract concluded with 4 publishers until 2023 for 16 databases which are already used at the level of the digital platform of the national online documentation system SNDL Increase in subscribers by 5%/year.
- implement actions to promote research results and scientific and technological dissemination:** Encourage young researchers to develop their innovative projects in incubators through caravans and workshops in collaboration with incubators and scientific clubs in different regions of the country

4. CONCLUSION

Based on what we have discussed in this research paper; it becomes clear to us that the general budget in Algeria has undergone reforms brought about by Organic Law 18-15 related to financial laws. It has transitioned to a program-based budget that sets programmed objectives expected to be achieved in the medium term. Our study focused on the Ministry of Higher Education and Scientific Research, which served as a model in managing its budgets. This ministry is presented by portfolios grouping together a set of programs contributing to a public policy.

Results: In response to the problem statement of our study and the validity of our hypothesis, we reached the following results:

- The program represents the new unit of credit specialization instead of the chapter, and Each program will be associated with clearly defined objectives and expected results. Therefore, presenting credits by objectives, besides its strategic nature, will promote better coherence in public action by avoiding excessive fragmentation of public policies, this confirms the validity of the first hypothesis;
- Each program manager defines, within a strategy, objectives measured by outcome indicators with a target to achieve. These commitments are included in the Performance Plans and Reports (RPP) associated with the Budget Proposal (PLF), and the results are reflected similarly in the Mid-Year Reports (RMR) associated with the Settlement Law, this confirms the validity of the second hypothesis;
- A high-performing entity must be both effective and efficient. It is effective when it achieves the goals it has set for itself. It's efficient when it minimizes the resources used to achieve those goals;
- Directing management towards results cannot simply entail defining objectives and target values, followed by allocating the necessary credit envelopes to achieve them;
- The link between budget allocation and performance objectives is not mechanical: an improvement in socioeconomic outcomes or service quality can, for example, be achieved with constant resources through improved credit implementation or better resource allocation;
- The Ministry of Higher Education has surpassed the COVID-19 crisis to continue achieving its goals according to the qualitative and quantitative indicators and effectiveness indicators it has set. Among these achievements are the activation of digital platforms for pedagogical services, the most famous of which is the "Progress" platform, the opening of higher schools, and facilitating the registration of baccalaureate students with zero paperwork, research projects.

Recommendation: several suggestions for effectively managing the objectives of the program portfolio in Algeria. Therefore, based on the aforementioned results, we recommend:

- ✓ To ensure the effectiveness of managing the objectives of the program portfolio, credits should be considered as a means to achieve results rather than an end in themselves;
- ✓ Training executives and staff has become necessary to control various new technologies;
- ✓ Activating accountability for program managers and sub-programs enhances the effectiveness of managing the objectives of the public budget and monitoring their implementation;

- ✓ The necessity of international cooperation and benefiting from the experiences of experienced countries in this field.

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