

MINISTRY OF EDUCATION

MINISTRY OF FINANCE

THE ACADEMY OF FINANCE



DONG THI PHUONG NGA

**FINANCIAL MANAGEMENT FOR THE SCIENTIFIC
AND TECHNOLOGICAL ACTIVITIES OF THE HIGHER
EDUCATION INSTITUTES UNDER THE MINISTRY OF
NATIONAL DEFENSE**

Major: Finance - Banking

Code : 9.34.02.01

SUMMARY OF THE DOCTORAL THESIS

Hanoi - 2021

The study has been completed at
THE ACADEMY OF FINANCE



Scientific Supervisors: 1. Assoc. Prof. & Dr. Ngo Thanh Hoang
2. Assoc. Prof. & Dr. Vu Van Tung

Reviewer 1:
.....

Reviewer 2:
.....

Reviewer 3:
.....

The thesis will be defended at the Academy-level PhD Thesis Examination Board

Location: PhD thesis defense room, Room

At:..... hour on....., 2021

The thesis could be looked up at:

- Vietnam National Library.
- Library of the Academy of Finance.

PREAMBLE

1. Rationale

In the higher education institutions under the Ministry of National Defense, teaching and scientific research activities are two key tasks. The funding sources for scientific and technological activities of the higher education institutions under the Ministry of National Defense are mainly allocated from the state budget upon recommendations. However, limited finance - based investment in science and technology is ineffective. The higher education institutes have mainly spent money on research topics at grassroots level while the studies at branch, ministry and national levels are still limited; inefficient use of Science and Technology Development Funds; financial inspection and supervision of scientific and technological activities has not been focused.

It is due to many reasons such as the application of state budget management is still based on input factors, the state budget allocation method is upon recommendations from the junior units; the system of Science and Technology Development Fund at all levels has not been properly built and developed, has not brought into full play its high efficiency; awareness and capacity of officials in charge of financial inspection and supervision for the scientific and technological activities of the higher education institutions under the Ministry of National Defense are unqualified. Therefore, the selection of the Thesis title: *“Financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense”* has urgent significance both in theory and practice.

2. Overview of the research reality related to the Thesis title

In the world as well as in Vietnam, there have been many quite comprehensive and profound research works on the mechanism of

autonomy, self-responsibility, financial solutions for the scientific and technological development in general or the financial mechanism for scientific and technological activities in public universities in Vietnam. Theory and practice of financial management for scientific and technological activities have been mentioned in several studies but they have not been associated with with specific characteristics of performing scientific and technological tasks in education, training and executing the military and defense tasks. The content of financial management has not been fully studied in terms of: financial resource management; management of allocation and use of financial resources; examine, finance examining, inspection and audit for the scientific and technological activities in the interrelationship between the governing body (the State, the Ministry of National Defense) and the higher education institutions under the Ministry of National Defense. Therefore, the research questions of the Thesis title have not mentioned before.

3. Purpose, tasks and research questions of the thesis

3.1. Purpose of study, the thesis proposes a number of solutions to improve financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense by 2025 with a vision to 2030.

3.2. Tasks of study

- Systematize and clarify basic theoretical issues on financial management for the scientific and technological activities of the higher education institutions in the army.

- Survey, analyze and evaluate the current situation of financial management for scientific and technological activities of the higher education institutions under the Ministry of National Defense in the period of 2016-2020.

- Propose groups of solutions and recommendations to improve financial management for scientific and technological activities of the higher education institutions under the Ministry of National Defense by 2025, with a vision to 2030.

3.3. Research questions

4. Object and scope of the study

4.1. Object of study: Theoretical and practical issues in financial management for the scientific and technological activities of the higher education institutions in the army

4.2. Scope of study

- *Regarding research content:* (1) Managing financial resources for investment in scientific and technological activities of the higher education institutions in the army; (2) Managing the allocation and use of financial resources to invest in scientific and technological activities of the higher education institutions in the army; (3) Inspecting, testing and auditing financial scientific and technological activities of the higher education institutions in the army.

- *Regarding research space:* 06 academies under the Ministry of National Defense/10 military academies: National Defense Academy (NDA), Military Technical Academy (MTA), Military Medical Academy (MMA), Military Academy of Logistics (MLA), Political Academy (PA), the Army Academy (AA).

- *Regarding research time:* The thesis focuses on data research in the period of 2016-2020. The proposed solution milestone is from now to 2025, with a vision to 2030.

5. Methods and research framework of the thesis

On the basis of dialectical and historical materialism methodology, the thesis uses a combination of other research methods such as: logical method in combination with historical, statistical method, analytical

method - synthesis, comparison, method of summarizing practice; survey method, survey method, expert method.

6. Scientific and practical significance of the study

6.1. Scientific significance of the study: The Thesis title has systematized and clarified the basic theories of financial management for the scientific and technological activities of the higher education institutions in the military.

6.2. Practical significance of the study: The Thesis title has clearly analyzed and evaluated the current situation of financial management for scientific and technological activities of the higher education institutions under the Ministry of National Defense in the period of 2016-2020. Then, address a number of solutions and recommendations to improve the financial management for scientific and technological activities of the higher education institutions under the Ministry of National Defense by 2025, with a vision to 2030.

7. New contributions of the Thesis title

- Develop and perfect theory on financial management for the scientific and technological activities of the higher education institutions in the army on the basis of clarifying the peculiarities of scientific and technological activities at the military universities.

- Complete the evaluation criteria for financial management for the scientific and technological activities of the higher education institutions in the army.

- Draw 5 valuable lessons from foreign experiences on financial management for the scientific and technological activities of the higher education institutions.

- Research, assess the current situation, address the limitations and causes of limitations in financial management for the scientific and technological activities of the higher education institutions in the army in the period of 2016-2020.

- Propose solutions to improve financial management for the scientific and technological activities of the higher education institutions in the army by 2025, with a vision to 2030.

8. Design of the study

Chapter 1: General theory of financial management for the scientific and technological activities of the higher education institutions in the army.

Chapter 2: Reality of financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense.

Chapter 3: Improving financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense.

Chapter 1

GENERAL THEORY OF FINANCIAL MANAGEMENT FOR THE SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES OF THE HIGHER EDUCATION INSTITUTIONS IN THE ARMY

1.1. Financial management for the scientific and technological activities of the higher education institutions in the army

1.1.1. The higher education institutions in the army

The higher education institutions in the army refer to the education providers belonging to the national education system, performing the higher education function, conducting scientific and technological activities to meet the requirements on army construction and national defense improvement

1.1.2. Scientific and technological activities of the higher education institutions in the army

1.1.2.1. Concept

Scientific and technological activities of the higher education institutions in the army are scientific research, experimental research and development, application of technology, promotion of initiatives

and creative activities to develop science and technology, train highly qualified human resources for education as well as military and national defense tasks.

1.1.2.2. Characteristics

1.1.2.3. Roles

1.1.3. Financial management for the scientific and technological activities of the higher education institutions in the army

1.1.3.1. Concept of financial management for the scientific and technological activities of the higher education institutions in the army

Financial management for the scientific and technological activities of the higher education institutions in the army reflects revenues and expenditures for scientific and technological activities of the higher education institutions in the army; expressed in the form of monetary value to perform scientific research tasks at the higher education institutions in the army.

1.1.3.2. Characteristics of financial management for the scientific and technological activities of the higher education institutions in the army

1.1.3.3. Content of financial management for the scientific and technological activities of the higher education institutions in the army

- Financial sources from the state budget: financial sources from the state budget and from the national defense budget

- Other financial sources

1.2. Financial management for the scientific and technological activities of the higher education institutions in the army

1.2.1. Concept and role of Financial management for the scientific and technological activities of the higher education institutions in the army

Financial management for the scientific and technological activities of the higher education institutions in the army is a collection of management methods and tools governed by appropriate management principles to

create, distribute and use financial resources for scientific and technological activities of the higher education institutions in the army.

1.2.2. Principles, methods and tools of financial management for the scientific and technological activities of the higher education institutions in the army

1.2.2.1. Management principles: Principle of democratic centralism; the principle of efficiency, the principle of unity; principles of openness and transparency

1.2.2.2. Management methods and tools

Management methods: Organizational - administrative method; Economic method; Methods of education. *Management tools:* Legal tools; Planning tool; Policy tool.

1.2.3. Content of financial management for the scientific and technological activities of the higher education institutions in the army

1.2.3.1. Management of investment financial resources for scientific and technological activities

Firstly, manage financial resources from the state budget directly through the budget estimation.

Secondly, manage financial resources from the state budget indirectly allocated through the science and technology fund.

1.2.3.2. Management of allocation and use of financial resources

a) Management of allocation of financial resources from the state budget

As the establishment and operation of a mechanism for allocating financial resources under certain principles, criteria, bases, norms and calculation methods to ensure that each level and each unit has sufficient financial resources to perform tasks according to assigned functions. Budget allocation must be in line with the guidelines, viewpoints and goals of the State and the army from time to time.

b) Management of use of financial resources from the state budget:

Management of use of financial resources from the state budget: by two methods: management based on input and task performance result.

c) Managing the allocation and use of financial resources from the science and technology fund: The fund provides funding according to the schedule and conditions stated in the scientific research contract between the concerned parties.

1.2.3.3. Finance examining, inspection and audit

As overall management tools and methods, established by the subjects involved in the operation of the mechanism, in order to monitor and check the creation, allocation and use of financial resources, to promptly have appropriate interventions and adjustments to ensure the financial sustainability and target determination of the units.

1.2.4. Evaluation criteria of financial management for the scientific and technological activities of the higher education institutions in the army

1.2.4.1. Criteria for evaluating financial resource allocation activities

Fiscal discipline; Allocative efficiency; Operational efficiency; Accountability; Transparency.

1.2.4.2. Criteria for evaluating the effectiveness of using financial resources

The norms must be fully developed to serve as a basis for making estimates; The expenditure norms must be scientific and practical; Allowing topic owners to be flexible in arranging expenditures and spending levels with approved budget limits; Simplifying administrative procedures; Well controlling research results.

1.2.4.3. Criteria for evaluating financial inspection and examination

Activities with focus and key points, close coordination, avoidance of overlapping, duplication; Completed mechanisms and policies for

financial management for scientific and technological activities; Positive change in awareness and behavior of organizations and individuals; Improved cost efficiency.

1.2.5. Factors affecting financial management for the scientific and technological activities of the higher education institutions in the army

1.2.5.1. Objective factors: Socio-economic environment; International integration in science and technology; Characteristics of scientific and technological activities in the higher education institutions in the army; Features of scientific and technological products; Capacity and results of scientific and technological activities of the higher education institutions in the army.

1.2.5.2. Subjective factors: The State's viewpoints, orientations and economic development policies; Science and technology development strategy of the State and the Ministry of National Defense; Awareness and qualifications of senior executives; Organizational model of financial management for scientific and technological activities

1.3. International experience on financial management for the scientific and technological activities of the higher education institutions and lessons for the Ministry of National Defense of Vietnam

1.3.1. International experience

1.3.1.1. Regarding budget allocation for scientific and technological activities

1.3.1.2. Regarding inspection, examination and sanction

1.3.2. Lessons for the Ministry of National Defense of Vietnam

(1) Renovate the mechanism of allocating funds from the state budget. (2) Strengthen the budget allocation for scientific and technological activities by project through fund and bidding mechanism. (3) Strengthen the budgeting policy subject to output products. (4) Funds must be used and controlled as investment capital, of which effectiveness is evaluated based

on the results of practical application. (5) Synchronously performance in prevention and fight against petty corruption.

Conclusions of Chapter 1

Chapter 2

REALITY OF FINANCIAL MANAGEMENT FOR THE SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES OF THE HIGHER EDUCATION INSTITUTIONS UNDER THE MINISTRY OF NATIONAL DEFENSE

2.1. The scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.1.1. System of the higher education institutions under the Ministry of National Defense

2.1.1.1. Introduction of the higher education institutions under the Ministry of National Defense

2.1.1.2. Organizational structure of the higher education institutions under the Ministry of National Defense

2.1.2. The scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.1.2.1. Science and technology tasks

2.1.2.2. Specific field of study

2.1.2.3. Results of scientific and technological activities

2.2. Organizing the financial management apparatus for scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.2.1. Organizing the financial management apparatus directly allocated from the state budget

2.2.2. Organizing the financial management apparatus from the state budget indirectly provided through the Science and Technology Development Fund

2.3. Reality of financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.3.1. Reality of financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.3.1.1. Reality of managing financial resources for investment in scientific and technological activities of the higher education institutions under the Ministry of National Defense

- *In period of 2016-2019:* The budget estimate for scientific and technological activities is made based on the State Budget Law, 2002 and directly the Joint Circular No. 23/2004/TTLT-BTC-BQP.

- *From the budget of 2020:* The budget estimation process is implemented in accordance with the 2015 State Budget Law, the Decree No. 165/2016/ND-CP and the Decision No. 3500/QĐ-BQP.

Table 2.9: Summary of approved budget estimates for scientific and technological activities of the higher education institutions under the Ministry of National Defense in period of 2016-2020

Unit: VND million

Approved budget estimates	2016		2017		2018		2019		2020	
	Amount	Percent (%)	Amount	Percent (%)	Amount	Percent (%)	Amount	Percent (%)	Amount	Percent (%)
State budget	95,550	48.98	112,540	54.31	283,630	63.52	366,260	80.33	257,660	4.53
Budget for national defense	99,516	51.02	94,673	45.69	162,880	36.48	89,672	19.67	88,055	25.47
Total	195,066	100	207,213	100	446,510	100	455,932	100	345,715	100

Source: Budget settlement report of 6 institutes

The approved budget estimates generally fluctuated during the research years, but the growth rate is uneven and discontinuous. In which, the state budget approval is prevailing.

2.3.1.2. Managing financial resources indirectly from the state budget

Table 2.10: Financial sources from the scientific development fund and investment technology of the higher education institutions under the Ministry of National Defense in the period of 2016-2020

Unit: VND million

Financial source \ Year	2016	2017	2018	2019	2020
National Science and Technology Development Fund	-	-	3,500	3,050	-
Science and Technology Development Fund/Ministry of National Defense	-	-	-	-	-
Total	0	0	3.500	3.050	0

a) Indirect funding through the National Science and Technology Development Fund: The funding is based on the contract between the Ministry of Science and Technology and the organization and individual in charge of performing the task. Funding by payment order through deposit account.

b) Indirect funding through Science and Technology Development Fund/Ministry of National Defense: by 2020, this fund has not been put into operation.

2.3.2. Reality of management, allocation and use of financial resources for scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.3.2.1. *Managing the allocation of financial resources from the state budget and defense budget*

- Principles of budget allocation: based on needs and proposed tasks of the higher education institutions.

- Basis for allocation: Norms according to the Circular No. 87/2016/BQP. The factors for determining allocation are the inputs (payroll), the number of tasks registered or listing expenditures for scientific and technological activities.

- Allocation process:

Based on the budget estimates assigned by the State to the Ministry of National Defense and the budget estimates made by the higher education institutions under the Ministry of National Defense, the Military Science Department/Ministry of National Defense shall send a written request to the Finance Department/Ministry. The National Defense shall coordinate in formulating a budget allocation plan and submit it to the Minister of National Defense for reporting to the Standing Board of the Central Military Commission. After the Central Military Commission approves, the Minister of National Defense signs the decision to assign the budget estimate and notify the units under the Ministry of National Defense. The Finance Department shall notify the Military Science Department of the professional budget allocated to the higher education institutions. The Military Science Department is responsible for allocating funds to the higher education institutions under the Ministry of National Defense for research on scientific topics.

Table 2.11: Summary of state budget, defense budget directly allocated for scientific and technological activities of the academies under the Ministry of National Defense for the period of 2016-2020

Unit: VND million

Year Academies	2016	2017	2018	2019	2020	Total
NDA	31,733	28,614	110,895	112,051	91,630	374,923
MTA	2,061	2,260	2,960	1,500	1,910	10,691
MMA	18,300	22,435	38,363	27,554	27,862	134,514
MLA	23,503	2,695	2,230	1,710	1,740	31,878
AP	8,350	10,782	10,315	9,461	8,735	47,643
AA	2,400	3,045	2,510	1,935	1,740	11,630
Total	86,347	69,831	167,273	154,211	133,617	611,279

The ratio of the allocated budget compared to the approved estimate for the period of 2016-2020 is 44%, 33%, 37%, 33% and 38%, respectively.

2.3.2.2. Management and use of financial resources from the state budget and the budget for national defense

Firstly, regarding the expenditure norms: management agencies monitor expenditures under the Circular No. 87/2016/TT-BQP.

Secondly, regarding lump-sum cost estimate: Comply with the Joint Circular No. 27/2015/TTLT-BKHHCN-BTC. Currently, 100% of research tasks are done by partial cost estimate and very few projects are spent on the final product.

Thirdly, regarding settlement

Based on the guidance on finalization and settlement of the Finance Department, the Finance Committee of academies shall make settlement reports on scientific and technological activities and send them to superior financial authorities.

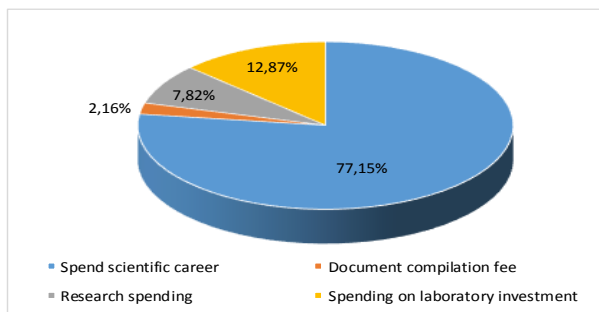


Figure 2.7: Expenditure structure for scientific and technological activities in the higher education institutions under the Ministry of National Defense in the period of 2016-2020

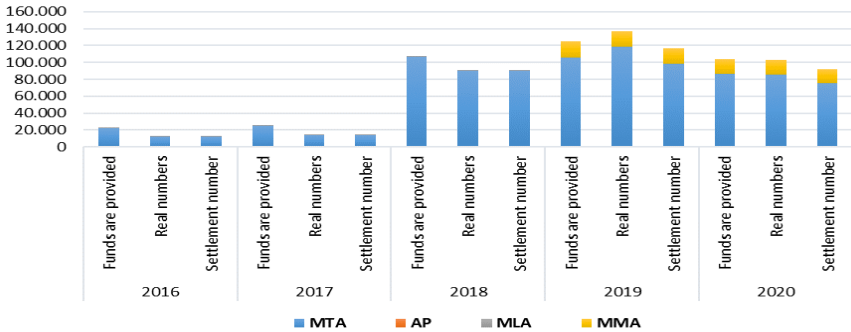


Figure 2.8: Summary of allotted funds, actual expenditures, and state budget finalization value of the higher education institutions under the Ministry of National Defense in the period of 2016-2020

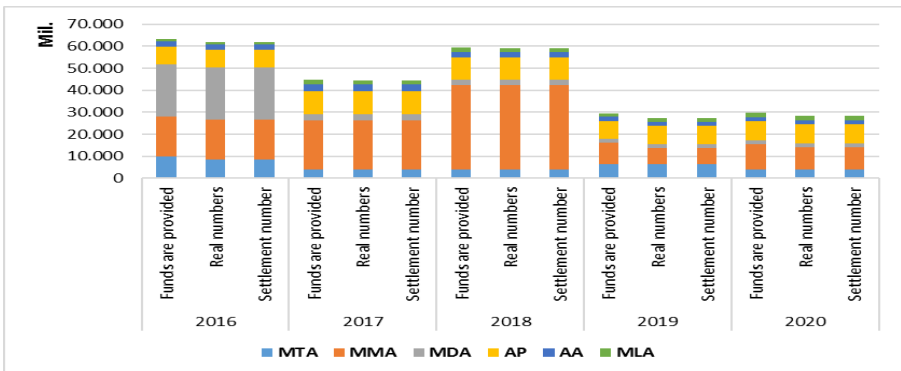


Figure 2.9: Summary of allotted funds, actual expenditures, and national defense budget finalization value of the higher education institutions under the Ministry of National Defense in the period of 2016-2020

For multi-year transitional tasks, while finalizing by fiscal year; the budget is often allocated late compared to the actual implementation; sometimes causing the scientific researchers "running" documents.

2.3.2.3. Managing the allocation and use of science and technology development funds

* *For the National Fund for Science and Technology Development:*
The project is settled once after completing and liquidating the contract.

* *For Science and Technology Development Fund/Ministry of National Defense:* By 2020, this fund has not been put into operation. Therefore, during the research period, there was no management, allocation and use of the Science and Technology Development Fund/Ministry of National Defense.

2.3.3. Reality of financial inspection, and audit for scientific and technological activities of the higher education institutions under the Ministry of National Defense

Contents of settlement inspection and audit: implementation of spending norms; payment procedures, research project settlement. Besides the achieved results, there is still the phenomenon of incorrect spending the approved budget; excess spending under the governed regimes, standards and norms; Incomplete payment documents and procedures...

2.4. Reality assessment of financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense

2.4.1. Achieved results

Firstly, in the financial management apparatus organization

The organizational structure of the financial management apparatus is reasonable; creating favorable conditions for the higher education institutions.

Secondly, in financial resource management

The norms as a basis for building budget estimates for scientific and technological activities have been adjusted and made more

scientifically. The budget estimation process has been consistent with the 2015 State Budget Law. The allocation of state budget funds through the fund mechanism has increased active performance of organizations and individuals in accordance with the characteristics and international practices.

Thirdly, in the allocation and use of financial resources

Ensure fiscal discipline, accountability and transparency requirements. Create conditions for the higher education institutions in promoting scientific and technological activities. Assign autonomy to scientists in implementing assigned tasks. The National Science and Technology Development Fund has gradually overcome the difficulties in scientific and technological activities.

Fourthly, in financial inspection, audit

Expenditures are broken down into very detailed categories, with specific and clear norms, creating favorable conditions for expenditure control. Inspection and audit activities are maintained regularly. Contents of inspection and audit basically meet the requirements.

2.4.2. Limitations

Firstly, in financial resource management

Inadequacies in the funding approval stage; Norms for the construction of cost estimates are still unreasonable; Expenditures are required to be elaborated in detail, making it difficult to make estimates; The additional National Science and Technology Development Fund is made according to an unreasonable fiscal year; the higher education institutions do not have access to funding from the Science and Technology Development Fund of the Ministry of National Defense.

Secondly, in the allocation and use of financial resources

Allocate the state budget for scientific and technological activities on basis of the proposals from lower level, using basic average expenditure calculation. The regulation of expenditures must not be different from the original estimate, causing difficulties for scientists in

the process of using funds; Regulation of many specific spending norms, which unflexible, backward and unpractical; The implementation of the Joint Circular No. 27/2015 is still slow; Payment and settlement procedures are still cumbersome and complicated.

Thirdly, in financial inspection, audit

The content of financial inspection and audit is not comprehensive, specific and detailed.

2.4.3. Causes

2.4.3.1. Objective causes

Scientific and technological activities have their own characteristics, the "valuation" of gray matter is extremely difficult. Lack of infrastructure for the commercialization of research results in academies.

2.4.3.2. Subjective causes

- Inadequate norms make it difficult to implement lump-sum spending;

- The slow funding method has been renewed;

- Funds are allocated slower than planned and many scientific administrative procedures

- The system of funds for science and technology development has not been effective;

- The financial management agency has not been able to develop comprehensive financial inspection and audit contents for scientific and technological activities;

- The database on scientific and technological activities in the Ministry of National Defense in general and the higher education institutions under the Ministry of National Defense has not been systematically built.

Conclusions of Chapter 2

Chapter 3

IMPROVING FINANCIAL MANAGEMENT FOR THE SCIENTIFIC AND TECHNOLOGICAL ACTIVITIES OF THE HIGHER EDUCATION INSTITUTIONS UNDER THE MINISTRY OF NATIONAL DEFENSE

3.1. Direction, objectives and tasks of scientific and technological activities of the higher education institutions under the Ministry of National Defense in the period of 2021 - 2025

3.1.1. Direction

3.1.2. Objectives

3.1.3. Tasks

3.2. Objectives and perspectives on improving financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense by 2025, with a vision to 2030

3.2.1. Objectives: To improve the efficiency in using financial resources and in performing scientific and technological activities of the higher education institutions under the Ministry of National Defense.

3.2.2. Point of view

- Synchronicity, right focus and key points, in line with the state's law on finance - budget and national defense characteristics, better meetings the requirements on the tasks of education, training and scientific research in the fields of science and technology of the academies under the Ministry of National Defense.

- High inheritance and development; ensuring science, practicality and feasibility.

3.3. Solution to improving financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense

3.3.1. The group of solutions to complete the management of investment financial resources for scientific and technological activities

3.3.1.1. Improving the operational efficiency of the National Science and Technology Development Fund

- The State needs to complete synchronously the regulations on the National Science and Technology Development Fund
- The National Fund for Science and Technology Development needs to issue detailed guidelines on funding and lending.
- The National Science and Technology Development Fund needs to improve the quality of appraisal activities of programs and projects in the field of military and national defense.
- The higher education institutions must build and maintain close relationships with the Fund Management Council.

3.3.1.2. Improving the operational efficiency of the Science and Technology Development Fund of the Ministry of National Defense

- Strengthen the propaganda work.
- Establish a channel to exchange information on the establishment of the enterprise's science and technology development fund.
- Develop a mechanism to assign military enterprises to actively approve and use funds from the budget
- Develop the regulation on guiding the funding of the Science and Technology Development Fund/Ministry of National Defense.
- Develop the regulations on the financial negotiation process between the fund and the author performing the research task.
- When the Science and Technology Development Fund/Ministry of National Defense comes into operation, the higher education institutions must closely monitor the fund's operation in order to access, exploit and use capital from the fund.

3.3.2. The group of solutions to complete the management of allocation and use of financial resources to invest in scientific and technological activities

3.3.2.1. Completing the method of allocating state budget for scientific and technological activities of the higher education institutions under the Ministry of National Defense

a) Based on the science and technology development strategy and the science and technology plan of the Ministry of National Defense

b) Based on the scientific and technological activities of the higher education institutions

The candidate builds 8 groups of evaluation criteria.

Evaluation methods: qualitative and quantitative assessment. Quantitative assessment is done to score the assessment on the basis of determining the weight, the rating level and summarizing the evaluation score according to each criterion, the group of evaluation criteria.

Scoring and ranking capacity of scientific and technological activities with 5 levels: Poor, Average, Fair, Good, Excellent.

The science and technology tasks proposed by the academies are only considered and budgeted when the results of the implementation of science and technology tasks in the same field have been completed in the previous year on schedule and ranked to be good or higher and their research results were applied in practice.

3.3.2.2. Meeting the state budget allocation requirements

Ensure a reasonable correlation between the science and technology development goals; Prioritize the allocation of funds to key research areas and urgent tasks set by practice; Ensure democracy, openness, transparency, fairness and efficiency.

3.3.2.3. Promoting the application of ordering and bidding methods to perform scientific and technological tasks

* *For ordering method:* Perform for research tasks with high feasibility, high probability of success.

* *For bidding method:* Every year, the Military Science Department needs to build a list of scientific and technological tasks to organize bidding. The higher education institutions decide to participate in the selection and bidding to perform scientific and technological tasks.

3.3.2.4. Promoting the application of lump-sum spending to the final product in scientific and technological activities

It is necessary to widely apply the lump-sum spending method. The goal to be achieved is that all tasks (including state, minister and grassroots levels) using the lump-sum state budget. In particular, applying the form of settlement to the final product is prevailing. If the task is too highly risk to determine the criteria of the final products, apply the form of partial settlement.

3.3.3. The group of solutions to strengthen the finance inspection and audit for the scientific and technological activities

3.3.3.1. Strengthening lump-sum settlement inspection and audit in scientific and technological activities

It is necessary to focus on the following contents: (1) Determine the main contents and parts of the work to be applied to the lump-sum spending; (2) Check the actual payment vouchers for the above mentioned contents and tasks; (3) Check the logic and suitability of the actual implementation of the work. For specific tasks, check and review the satisfaction of conditions to be allocated with lump-sum spending; contents and norms assigned to lump-sum spending; the compliance with the principles and regulations on management and use of the lump-sum allocated budget...

3.3.3.2. Strengthening inspection and audit using the allocated funds

The inspection contents include: (1) The basis and reasonableness of the expenditures must be consistent with the progress and consistent with the implementation results; (2) The rationality, validity and legality of the lump-sum procurement invoices.

3.3.3.3. Strengthening inspection of payment and advance funding

Strengthening inspection of reasonableness and validity of invoices and vouchers.

3.3.3.4. Strengthening the settlement inspection

Identify the main contents and parts of the work, which plays a decisive role in creating the final product; Check the reasonableness, validity and legitimacy of the actual vouchers for the above mentioned contents and tasks.

3.3.4. Other solution group

3.3.4.1. Build a database on scientific and technological activities in the army

3.3.4.2. Innovate the review of science and technology tasks

3.3.4.3. Create conditions of the higher education institutions under the Ministry of National Defense to mobilize financial sources outside the state budget

3.3.4.4. Encourage the higher education institutions to establish their own science and technology development funds

3.4. Conditions for implementing the solution

- The higher education institutions on duty need to improve the efficiency of management for scientific and technological activities in general and financial management for scientific and technological activities in particular.

- The higher education institutions need to effectively manage, exploit and use the invested laboratory.

- The higher education institutions need to step up training and raise the level of military science human resources; building strong research and research groups.

- The higher education institutions need to strengthen the link between training, scientific research and production.

3.5. Recommendations

3.5.1. Recommendations to the Ministry of Finance

3.5.2. Recommendations to the Ministry of Science and Technology

Conclusions of Chapter 3

CONCLUSIONS

The thesis has the following contributions:

Firstly, systematize, supplement and clarify theory of financial management for the scientific and technological activities of the higher education institutions in the army.

Secondly, analyze reality of financial management for scientific and technological activities of the higher education institutions under the Ministry of National Defense in the period of 2016-2020 in order to draw the achieved results, limitations and causes of limitations in financial management for the scientific and technological activities of the higher education institutions under the Ministry of National Defense at present.

Thirdly, propose four groups of solutions to improve financial management for scientific and technological activities of the higher education institutions under the Ministry of National Defense by 2025, with a vision to 2030: (1) Group of solutions to improve management financial resources for investment in scientific and technological activities; (2) Group of solutions to complete the management, allocation and use of financial resources for scientific and technological activities; (3) Group of solutions to strengthen the financial inspection and audit of scientific and technological activities; (4) Other solution group.

LIST OF PUBLICATIONS RELATED TO THE ISSERTATION WRITTEN BY THE DOCTORAL CANDIDATE

1. Dong Thi Phuong Nga (2018), “*Some issues to be discussed in the management of military science and technology budget*”, Economic and Forecasting Journal, Issue 7 (March, 2018)

2. Dong Thi Phuong Nga (2018), “*Financial solutions to promote scientific research activities at military academies and schools*”, Economic and Forecasting Journal, Issue 16 (June, 2018).

3. Dong Thi Phuong Nga (2019), “*Solution for sustainable development of the private economy in Viet Nam in globalization conditions*”, International finance and accounting research conference (November, 2019), et. al.

4. Dong Thi Phuong Nga (2019), “*Innovation of state budget allocation mechanism for science and technology activities in Viet Nam*”, International financing and accounting research conference (12/2019), et. al.

5. Dong Thi Phuong Nga (2020), “*Innovating the method of the state budget distribution for the scientific and technological activities of academies of the ministry of national defence*”, International financing and accounting conference for promoting sustainable development in private sector (December, 2020), et. al.

6. Dong Thi Phuong Nga (2020), “*International experience in financial management in science and technology activities of the universities and lessons for Viet Nam*”, Financial magazine (Vol. 3, Issue 4, 2020).

7. Dong Thi Phuong Nga (2021), “*Building strong research groups and research teams in military academies*”, Journal of Military Logistics Scientific Research (February, 2021), et. al.

8. Dong Thi Phuong Nga (2021), “*Assessment of scientific and technological capacity as a basis for state budget allocation to the higher education institutions under the Ministry of National Defense*”, Asia-Pacific Economic Review, Issue 585 (March, 2021).