

# State Management in Human Resources Development of Female Scientific Researchers

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**Abstract:** Humans are a nation's most important resource, playing a decisive role in the development of society. Women are a fundamental component of human resources. With a population that accounts for about half of the total population of a country, women have always been an important resource in the development and implementation of social development strategies in all countries in the world. Vietnam has always paid attention to the development of human resources in general, and human resources of women in scientific research, in particular. In recent years, the Government has formulated and promulgated many plans, strategies, legal documents and policies on the recruitment of, attraction towards, and training, re-training and honouring female scientists. Such is an important factor in promoting the development of the human resources of female scientific researchers in Vietnam.

**Keywords:** State management, human resources of women, scientific research.

**Subject classification:** Public management

## 1. Introduction

The state management of human resources development has a great impact on the human resources development of female scientific researchers in Vietnam. The state management on the human resources development of female scientific researchers includes the following contents: (1) development of plans, strategies, and planning for the development of female human resources; (2) development and promulgation of legal

documents in the human resources development of female scientific researchers; (3) implementation of the recruitment, employment, treatment and training of female scientific researchers; (4) examination, control and assessment of the management of human resources of female scientific researchers. There have been many studies on state management in the development of human resources in general; however, the research on the development of human resources of female scientific researchers

is very limited. This article analyses the current state of the implementation of some contents of state management in the development of human resources in Vietnam.

## **2. The state management in the development of plans and strategies of human resources of female scientific researchers**

Understanding the position and role of human resources in the cause of national development and defence, Vietnam has developed and promulgated many strategies and plans on the development of human resources in the past years, aiming to develop a contingent of highly qualified and skilled workers. The Strategy on Sustainable Economic, Cultural and Social Development in Vietnam in the 2011-2020 Period confirms: “Humans are at the centre of the sustainable development. Maximising the human factor as the subject, the main resource and the target of science and technology is the foundation and momentum for the sustainable development of the country. Modern and environmentally-friendly technologies should be prioritised in a wide range of sectors for sustainable development” [19]. The government considers the human resources development to be a “key and determining step” in the transformation of the growth model and sustainable development; to uniformly develop a contingent of qualified personnel in all domains with a rational structure by sector and by development field; to rapidly develop high quality human resources; to closely combine the development of human

resources with the development and application of science and technology, with the transformation of the growth model and the rapid increase of productivity, quality, efficiency and competitiveness of the economy. The Strategy on the Development of Education and Training in Vietnam also provides an orientation for the development of human resources in the 2011-2020 period. In this strategy, education development must effectively be “the first priority of the national policy, the cause of the Party, the state and the people” [19]; to strengthen the leadership of the Party, the management of the state, and to enhance the role of political, economic and social organisations in the education development. Investment in education is investment for development [19]. In particular, the government has issued the Strategy on the Development of Human Resources in Vietnam in the 2011-2020 Period. Its objectives are: “to make Vietnam's human resources the foundation and the most important advantage for the sustainable development of the country, international integration and social stability” [19]. The Strategy on Development of Human Resources in Vietnam in the 2011-2020 Period is the most important document in directing the development of human resources in general, and female human resources in scientific research in Vietnam in particular. Based on the guidelines in this strategy, the ministries, sectors and localities have developed detailed strategies and plans on the human resources development for themselves. In order to effectively implement the strategy on the human resources development during the period of industrialisation and modernisation, on 22 July 2011, the Prime Minister approved the

Planning on the Development of Vietnam's Human Resources in the 2011-2020 Period. The objectives of the planning are: By 2015, the human resources in science and technology of the country will consist of 103,000 people, of whom 28,000 people or more will have postgraduate degrees; and by 2020, there will be 154,000 people, of whom 40,000 people have postgraduate degrees. In order to specify the strategy on the human resources development in science and technology, on 29 December 2011, the Minister of Science and Technology signed Decision No.4009/QĐ-BKHCN approving the Planning on the Development of Human Resources in Science and Technology up to 2020. The objectives of this planning are to develop the human resources in science and technology of sufficient quantity and advanced qualification in the region and to gradually reach the qualification of the advanced countries, with a reasonable qualification, sectoral and regional structure [7].

### **3. The state management in the development and promulgation of legal documents regarding human resources development of women in scientific research**

One of the key tasks to develop the country's human resources in the period of industrialisation and modernisation is to gradually develop and perfect the system of legal documents on the development and management of human resources. Over the past years, with the efforts of specialised agencies, the government and the National Assembly, Vietnam has developed a quite complete system of legal

documents to promote the participation of the women in scientific research. Specifically, the following documents can be mentioned: The Constitution of 2013, Law on Gender Equality, Law on Public Employees, Law on Higher Education, Labour Code, Law on Science and Technology, Law on Marriage and Family, Decree No.115/2005/ND-CP (regulating the autonomy of the scientific and technological establishments), Decree No.29/2012/ND-CP (regulating the recruitment, employment and management of public employees), Decree No.08/2014/ND-CP (guiding the implementation of a number of articles of the Law on Science and Technology of 2013), Decree No.40/2014/ND-CP (regulating the employment of individuals engaged in scientific and technological activities), Circular No.16/2012/TT-BNV (promulgating regulations on and examination and assessment for recruitment of public employees); regulations on the examination for the promotion of professional titles for public employees, internal regulations on the recruitment examination and promotion examination of professional titles for public employees, Circular No.24/2014/TTLT-BKHCN-BNV (regulating the codes and criteria for professional titles of public employees in science and technology), Circular No.13/2016/TT-BKHCN (regulating the management of the scheme on training and re-training of scientific and technological human resources using the state budget), Circular No.21/2015/TTLT-BKHCN-BNV-BTC (guiding the implementation of the policy on the employment of individuals engaged in science and technology), etc.

The above-mentioned legal documents and sub-law documents serve as an important

guide for scientific research units and organisations, higher education institutions and localities in the development of human resources in scientific research in the service of the economic, cultural and social development of the country and the localities.

#### **4. The state management in the implementation of policies on recruitment, employment, training and honouring of human resources of female scientific researchers**

##### *4.1. The policy on recruiting and attracting women as human resources in scientific research*

The policy on the recruitment of women as human resources in scientific research is regulated in many different legal documents. Specifically, this is defined in the Law on Public Employees [15], the Law on Science and Technology of 2013 [16], the Labour Code, Decree No.29/2012/ND-CP (regulating the recruitment, employment and management of public employees) [11], and Circular No.15/2012/TT-BNV (of Ministry of Home Affairs guiding the recruitment, signing of labour contracts and compensation for training and re-training expenses for public employees) [10].

According to the documents mentioned above, the recruitment of public employees must be based on the work demand, the job position, the professional title criteria and funds for salaries of the public non-business entity. The recruitment principle for female human resources in scientific research must be open, transparent, fair, objective and lawful; to ensure the competitiveness and to recruit the right persons to meet the requirements of

the job positions and to prioritise talented people and those with meritorious services to the revolution and ethnic minorities. In order to be recruited into scientific research institutions, applicants must satisfy a number of conditions such as: having Vietnamese nationality and reside in Vietnam; filing a job application; having a clear personal background; having diplomas, training certificates, practitioner's certificates or talent suitable to the job positions; being physically fit to perform works or tasks and satisfy other conditions as required by the job positions determined by the public non-business entities, but not contrary to the regulations of the law. The recruitment is usually conducted in two forms: examination or recruitment assessment. According to the Law on Public Employees, for public research organisations and institutions which are given the autonomy, the heads of the public non-business entities shall recruit public employees and take responsibility for their decisions. If the public research organisations, units and institutes have not been given the autonomy, the competent agencies managing the public non-business entities shall recruit public employees or delegate the heads of the public non-business entities to carry out the recruitment.

The policy on attracting women as human resources in scientific research is stipulated in many legal documents, including the Law on Science and Technology, Decree No.40/2014/ND-CP (regulating the employment of and good treatment of individuals engaged in scientific and technological activities) [14]. Article 24 of the Law on Science and Technology

stipulates: “Individuals engaged in scientific and technological activities being overseas Vietnamese and foreign experts are encouraged to participate in scientific and technological activities in Vietnam” [16]. According to the regulations of the Law on Science and Technology, individuals engaged in scientific and technological activities who are overseas Vietnamese during their working term in Vietnam shall have the same rights and obligations as the organisations and individuals in the country. In addition, they are entitled to a number of other privileges [16], such as being appointed or hired to be the leaders of scientific and technological organisations; being assigned to assume the prime responsibility for the performance of scientific and technological tasks at all levels; being considered, recognised and appointed the titles of scientific research and technology according to the regulations of the Law on Science and Technology; being entitled to specialists' salary level according to the government's regulations and other preferences under contracts; and being entitled to the privileges on immigration, residence, housing and other privileges in accordance with the law.

#### *4.2. The policy on the employment of human resources of female scientific researchers*

The policy on the employment of women in scientific research in the past years is shown in the following documents: The 2010 Law on Public Employees (stipulating the use of public employees from Article 25 to Article 46, including the regulations on labour contracts; the appointment of professional titles, the change of professional

titles and job positions of public employees; the training and re-training of public employees; the secondment, appointment and dismissal of public employees; the assessment of public employees and retirement scheme of public employees); Decree No.29/2012/ND-CP (stipulating the recruitment, employment and management of public employees, specifically stipulating the contents of the policy on the employment of public employees, including: the assignment of tasks; the secondment, appointment and dismissal of public employees; the regulations on the change of professional titles, the assignment of organising examinations or promotion of professional titles for public employees; the regulations on the process and procedures for organising examinations or promotion of professional titles for public employees; the assessment of public employees; the regulations on the transfer and transition of public employees and the regulations on the dismissal and retirement of public employees); Decree No.40/2014/ND-CP (regulating the employment of individuals engaged in scientific and technological activities) [12]. Decree No.40/2014/ND-CP aims: 1) to create favourable conditions and working environments for individuals engaged in scientific and technological activities to maximise their capabilities and provide them with benefits worthy of the result of scientific and technological activities; 2) to create conditions for talents to perform important scientific and technological tasks so as to bring into full play their talents and provide them with benefits worthy of the tasks undertaken; 3) to ensure the resources for implementing the policy on the employment

of individuals engaged in scientific and technological activities. This decree specifies: the scientific research titles (or scientific titles, for short; including research assistants, researchers, principal researchers and senior researchers); the scientific titles in the public non-business entities engaged in scientific and technological activities (including: grade-IV scientific titles are research assistants, grade-III scientific titles are researchers, grade-II scientific titles are principal researchers, and grade-I scientific titles are senior researchers); the appointment of scientific research titles and scientific titles; the working regime of the scientists; the preferential treatment for those with special achievements; the regime for extension of working time for high-quality human resources in scientific research (such as professors, associate professors, doctors, leading experts). The preferential treatment of the state human resources of female scientific researchers in the public sector is reflected in the policy on salary, bonus, allowance and other benefits. The preferential treatment is regulated in the Law on Public Employees of 2010, the Law on Science and Technology of 2013, Decree No.204/2004/ND-CP of the government (on the salary regime applicable to cadres, civil servants, public employees and armed forces), Joint Circular No.01/2016/TTLT-BKHCN-BNV of the Ministry of Science and Technology and the Ministry of Home Affairs (guiding the appointment and salary ranking by professional titles for public employees in science and technology sector). Accordingly, the salary regime for public employees in scientific research does not have a separate salary schedule and uses

the same salary schedules together with other types of public employees in the public non-business entities; the method of calculating the actual salary is the same as that for other types of public employees; the senior researchers are entitled to the salary scale of 6 grades (from coefficient 6.20 to coefficient 8.0); the principal researchers are entitled to the salary scale of 8 grades (from coefficient 4.40 to coefficient 6.78); the researchers are entitled to the salary scale of 9 grades (from coefficient 2.34 to coefficient 4.98); the research assistants are entitled to the salary scale of 10 grades (from coefficient 2.10 to coefficient 4.89).

Therefore, it can be seen that the salary regime for human resources in scientific research is not higher than those for cadres, civil servants, and public employees. In fact, the treatment policy for scientists is worse than those for other sectors (such as for civil servants and teachers). For civil servants, besides the same salary regime as scientists, they are also entitled to the civil service allowance; for teachers and lecturers, besides salary, they are also entitled to the allowances for class attendance and seniority. Compared with the salary regime of the armed forces, the salary grades and coefficients of human resources in scientific research are much lower.

#### *4.3. The policy on training and re-training of human resources of female scientific researchers*

The policy on training and re-training of human resources of female scientific researchers is provided in the Law on Public Employees 2010, Decree No.29/2012/ND-

CP (regulations on recruitment and use of public employees) [15], [11]. Accordingly, the objectives of training and re-training the human resources of women in scientific research are to update their knowledge; to foster and improve their skills and methods of performing the assigned tasks; to contribute to the building of a contingent of officials with professional ethics and qualified professional capacity to ensure the quality of their professional activities. The training and re-training of human resources of female scientific researchers should be based on the work positions, the professional titles and the needs for the development of human resources of public non-business units; should ensure the autonomy of public non-business units in training and re-training activities; should encourage the officials to study and improve their qualifications to meet the requirements of the tasks; should ensure to be made public, transparent and efficient. Forms of training and re-training of human resources of female scientific researchers include training and re-training according to the criteria of managerial positions; re-training according to the scientific research titles; re-training to supplement and update knowledge and skills in service of scientific research activities. The contents, programmes, forms and duration of training and re-training should be based on the criteria of managerial positions and scientific research titles; and meet the requirements on supplementing, updating knowledge and skills in service of professional activities.

According to the results of a survey on research and development in 2012 and 2013 by the Ministry of Science and Technology, the training and re-training of human

resources of female scientific researchers are also paid attention to by the authorities. In 2011, out of the total of 43,844 scientists who directly performed scientific research, there were 2,890 female PhD-level scientists, 15,649 master's degree-level, 23,594 bachelor's degree-level and 1,711 college-level. After three years, by 2014, the number of female scientists with a PhD, master's, Bachelor's and college degree level are 3,637; 23,513; 27,692 and 2,004, respectively. Thus, in terms of expertise, after three years, Vietnam has trained an increased number of 747 PhDs, 7,864 master's and 4,098 bachelor's degree holders [6]. The contents of the training are mainly focused on the field and position of the scientists.

Regarding the forms of training, it is mainly conducted in universities, academies and research institutes in the country; a small number of scientists are trained abroad through some projects of the government such as Project 655, Project 911 and Project 2395 of the Prime Minister on the approval of the project on training and re-training of female human resources in science and technology in the country and abroad sponsored by the state budget. The activities in the field of re-training human resources of female scientific researchers in the past years have also been paid attention to by the management agencies of institutes, the public research departments, universities and academies. The training contents focused on the re-training of the political theory with preliminary, intermediate and advanced levels for individuals who are under planning for promotion and are holding managerial positions in scientific research organisations,

units and agencies, and for the leaders of departments, facilities, divisions of universities and institutes. The re-training on management and professional skills based on the managerial positions and scientific titles are also implemented regularly so that the scientists will be re-trained for the knowledge suitable with their positions. Annually, universities and institutes have dispatched thousands of level-3 lecturers to participate in the level-2 lecturers training courses, and hundreds of level-2 lecturers to level-1 lecturers training courses to improve their knowledge and skills. In addition, the institutes and scientific research departments have also facilitated their officials to attend the training courses for researchers, primary researchers and senior researchers.

In addition to re-training of political theory and management skills and professional knowledge in accordance with the scientific titles, female scientific researchers have also participated in foreign language courses, courses on the improvement of scientific research skills and methods, and courses on scientific and technological applications in scientific research activities. A survey by Kieu Quynh Anh for the PhD dissertation "State Management on Development of Human Resources of Female Scientific Researchers in Vietnam" shows that: 47 out of 300 surveyed participants said that the training of human resources of female scientific researchers had been done well, accounting for 15.67%; 92 out of 300 participants evaluated it as fair, accounting for 30.67%; and a large number, 161 out of 300 participants, said that the training had not been done well, accounting for 53.67%. The

results of this survey on the training of human resources of female scientific researchers indicate that: 41 out of 300 responders said that the training was performed well, accounting for 13.67%; 89 out of 300 responders said that it was performed at a fair level, accounting for 29.67% and 170 out of 300 responders evaluated that it was not performed well, accounting for 56.67%. A comparison of the opinions of the two surveyed groups shows that the evaluation results of the two groups are quite similar. This indicates that there is a correlation between the perceptions of the two surveyed groups, and the survey data reflects the actual situation of the training and re-training of human resources of female scientific researchers in our country today.

It was said that the training and re-training of human resources of female scientific researchers in Vietnam in recent time have not been of good quality and high efficiency. Many contents of the training and re-training have not been linked to practical requirements. The contents of the training are still slowly updated, the forms and modes of training are more of formalism than paying attention to quality. Although there are many programmes for training human resources in scientific research, they still focus on political theory, which is not really close to the titles and positions of the scientists.

#### *4.4. The policy on honouring female scientists*

In order to honour the scientists, the government now has different awards for scientists who have made substantial contributions and achievements in scientific



research. They are the Ho Chi Minh Award on Science and Technology; the State Science and Technology Award; the science and technology awards of the ministries, the ministerial-level agencies and the agencies under the government; and the science and technology awards of the People's Committees of the provinces and centrally-run cities. In addition, there are awards of organisations and individuals in order to honour the scientists who have achievements in scientific research, in particular, and science and technology activities, in general [13], [8], [9]. The Ho Chi Minh Award on Science and Technology and the State Science and Technology Award are organised once every five years, announced and awarded on the 2 September, the Vietnamese Independence Day. The reward for organisations and individuals who receive the Ho Chi Minh Award on Science and Technology will be equal to 270 times of the basic salary. For the State Science and Technology Award, the reward will be equal to 170 times the basic salary, calculated from the date of signing the award decision [13], [8].

Besides, the two awards mentioned above, the Ministry of Science and Technology also has a number of awards to honour the scientists. They are the Ta Quang Buu Award; the National Quality Award; the Vietnam Science and Technology Creation Award; the Kovalevskaya Award; the WIPO Award (the award of the World Intellectual Property Organisation under the United Nations), etc. The Ta Quang Buu Award is held annually by the Ministry of Science and Technology for Vietnamese

scientists who are authors of basic research studies in the fields of science and engineering. The award has been held since 2013. The Kovalevskaya Award is an annual award for outstanding female scientist groups and individuals, in order to honour those who have outstanding achievements in research and application of science into life, and bringing many benefits to the economic, social and cultural fields.

In evaluating the awards for honouring the scientists, some scientists say that the awards are not diverse; the awards on science and technology have not really been prestigious, and not much different from those in other fields. The orders, procedures and forms of those are also of formalism, cumbersome, complicated and have not really received the attention of the scientists in the country and abroad.

## **5. The state management in inspection, control and evaluation of the organisation and management of human resources of female scientific researchers**

Together with the measures of management, organisation and investment in the development of human resources in scientific research, the inspection and examination of the implementation of the state policies and laws on the development of human resources in scientific research in general, and human resources of female scientific researchers in particular, are highly paid attention to by competent authorities. In Vietnam, there are many organisations which perform the tasks of inspecting and examining the research and

development activities such as: the State Inspectorate, the Inspectorates of the Ministry of Science and Technology, the Ministry of Education and Training; inspectors of the ministries, departments, local governments and government-attached agencies (for example: Vietnam Academy of Science and Technology, Vietnam Academy of Social Sciences). In addition to the above organisations with inspection and examination functions, there are the inspection departments in organisations, units, academies and universities - these departments have the function of inspecting, examining, assisting the leaders of the organisations to perform the functions and tasks of management in general, and perform the policies and laws on the development of female human resources in particular.

Over the past years, the authorities have organised a number of administrative and specialised inspection teams to timely detect violations and inadequacies on the implementation of laws and policies related to the development of human resources of female scientific researchers. According to the reports by the Inspectorate of the Ministry of Science and Technology, in 2014, the Ministry's Inspectorate conducted 78 inspections, including six administrative inspections and inspections on the implementation of anti-corruption regulations and 82 specialised inspections. In 2015, the Ministry's Inspectorate directly conducted 88 inspections, including four administrative inspections and inspections on the implementation of anti-corruption regulations in four units under the ministry. According to the results of the inspection, one unit was found to be in violation, requested to return

VND 2.3 billion to the state budget. 84 specialised inspections were conducted in the fields of industrial property (IP); standards, metrology and quality; science and technology. The violations of 42 units were detected by the inspectors. The chief inspector of the ministry issued 42 decisions on administrative sanctions with total fines of over VND 1.6 billion.

The contents of the inspection and examination activities mainly focus on attracting, recruiting and using human resources in scientific research. Although many inspections and examinations have been often conducted, the violations and inadequacies in these activities have been rarely corrected. Very few violations in attracting, recruiting and using human resources in scientific research have been straightforwardly pointed out. On the other hand, the inspection and examination of the implementation of policies and regulations in the development of human resources in scientific research have not been conducted regularly; they are heavily of formalism and mainly conducted when having complaints or denunciations. Together with the inspection and examination of the recruitment and use of human resources in scientific research, the inspection and examination activities on training and re-training of human resources of female scientific researchers have been focused on. Over the past years, the inspectors of the Ministry of Science and Technology in coordination with the inspectors of the Ministry of Education and Training have organised many inspection teams to examine the performance of the training and re-training of human resources. The inspectors have found many universities,

academies and institutes and research institutes having violations in the training of labour force for the country, in general, and human resources in scientific research, in particular. The violations of the units with the function of training and re-training of human resources are mainly centred on following issues: The training contents and programmes, enrolment regulations, regulations on postgraduate training, postgraduate training processes and procedures, training quality and research guidance for master's degree and PhD candidates. Furthermore, the inspection of the implementation of research topics at research institutes and universities has also been paid attention to and implemented.

## 6. Conclusion

The current status of state management in human resources development of female scientific researchers in recent years has had many achievements. When Resolution No.20-NQ/TW of the 6<sup>th</sup> Plenum of the 11<sup>th</sup> Central Committee of the Communist Party (on science and technology development to serve industrialisation and modernisation in socialism-oriented market economy and international integration) was issued [4], the government and the ministries, especially the Ministry of Science and Technology, have issued new policies to promote the development of science and technology, including new policies on attracting, recruiting and rewarding human resources in scientific research. So far, the policy system has been relatively synchronous, stable and complete; it has created motivation for the development of science and technology,

including human resources in scientific research. Especially, from 2010 onwards, Vietnam has developed a system of strategies and plans for the development of human resources, in general, and human resources of female scientific researchers in particular. The system is quite complete and synchronous from the central level to localities. As a result, Vietnam has attracted a large number of female scientific researchers; the female scientists who participate in scientific research have gradually contributed to a greater extent to the economic, cultural and social development of the country; the quality of human resources of female scientific researchers has been improved; there have been greater numbers of female scientists getting a Master's or PhD degree; greater numbers of female scientists winning scientific awards (from research organisations, line management agencies, the Ministry of Science and Technology, the two academies, and other governmental and non-governmental organisations); many female scientists are honoured by international women's science award organisations, and are respected by the scholars in the country and abroad. For the development of human resources of female scientific researchers to meet the requirements of integration, we need to have solutions to implement the contents of the state management in the human resources development of female scientific researchers well.

## Notes

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