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Evaluation of the Implementation of Baotou's Science and Technology Talent Policies within the Context of Comprehensive Model Autonomous Region Development

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Abstract: This study aims to evaluate the effectiveness of Baotou's science and technology talent policies under the broader context of establishing a model autonomous region. The primary objective is to assess the effectiveness of these policies in attracting, nurturing, and retaining talent, as well as their impact on local economic and technological development. To achieve this, the study employs literature review and policy analysis methods, systematically examining relevant policy documents, academic literature, and government reports. Initially, the study comprehensively reviews Baotou's science and technology talent policies, analyzing the background, objectives, and specific measures. It then compares these policies with those in other regions to identify unique and innovative aspects. Finally, using a theoretical framework, the study evaluates the practical outcomes and identifies existing issues in policy implementation. The results indicate that Baotou's policies have facilitated the introduction and cultivation of scientific talent, thereby enhancing local innovation capabilities and economic growth. However, challenges such as insufficient policy enforcement and incomplete supporting measures remain. The study concludes that future efforts should focus on strengthening policy enforcement, improving supporting measures, and optimizing the talent service environment to better leverage these policies for advancing Baotou's scientific and economic development. This research aims to provide valuable insights for other regions in formulating and implementing science and technology talent policies.

Keywords: Science and Technology Talent Policies; Baotou; Model Autonomous Region; Policy Evaluation; Local Economic Development

1. Preface

1.1 Research Background and Significance

In the context of the rapid development of globalization and information technology, scientific and technological talents have become a key factor in promoting national and regional economic development. Especially under the strategic framework of building a model autonomous region in all aspects, Baotou City, as an important city in Inner Mongolia Autonomous Region, the implementation effect of its scientific and technological talent policy is directly related to the local scientific and technological innovation ability and the quality of economic development. Therefore, the in-depth research on the policy of science and technology talents in Baotou city is not only helpful to understand the effectiveness and existing problems of the policy implementation, but also can provide reference for other regions, which has important theoretical and practical significance.

1.2 Research Objectives and Problems

The purpose of this study is to evaluate the effect of Baotou's science and technology talent policy in attracting, training and retaining science and technology talent, and to explore the problems and challenges encountered in the process of policy implementation. the specific research questions include: What are the main contents and characteristics of Baotou's science and technology talent policy? What is the effect of policy implementation? What are the problems and shortcomings? How can policies be optimized and improved?

1.3 Review of Research Status at Home and

Abroad

Domestic and foreign scholars have made a series of achievements in the research of science and technology talents policy. Foreign research mainly focuses on policy evaluation methods, policy effect analysis and international comparison. Domestic research focuses more on policy content analysis, policy implementation mechanism and local practice cases. However, there are relatively few special studies on the policy of scientific and technological talents in Baotou, especially in the context of building a model autonomous area in all aspects, the research on the policy of scientific and technological talents in Baotou is even more scarce. Therefore, this study will fill the research gap in this field and provide a new perspective and data support for related research. [1-10]

1.4 Research Methods

By using literature analysis method and policy analysis method, this study systematically combed and analyzed related policy documents, academic literature and government reports, and deeply explored the background, content and implementation of Baotou's science and technology talent policy. At the same time, combined with the theoretical framework, evaluate the effect of the policy in practice and the existing problems. Through comparative analysis of similar policies in other areas, the uniqueness and innovation of Baotou's policies are discussed, and theoretical support and practical suggestions are provided for policy optimization.

2. Overview of Science and Technology Talent Policy In Baotou

2.1 Background of Policy Formulation

As an important industrial base and scientific and technological innovation center in Inner Mongolia Autonomous Region, Baotou City is facing the problems of shortage of scientific and technological talents and unreasonable structure. In order to cope with this challenge, under the strategic guidance of building a model autonomous region in an all-round way, the Baotou municipal government has formulated a series of policies on scientific and technological talents, aiming to attract and train high-level scientific and technological talents, and enhance the local scientific and technological innovation ability and economic development level.

2.2 Policy Objectives and Contents

The main goal of Baotou's science and technology talents policy is to build an environment conducive to the growth and innovation of science and technology talents, and to attract and retain outstanding science and technology talents at home and abroad by providing preferential policies and improving the service system. the policy contents include: providing incentives such as housing subsidies, research start-up funds, and tax incentives; Establish a platform for training and exchange of scientific and technological talents; Optimize the evaluation and incentive mechanism of scientific and technological talents; Strengthen the docking of scientific and technological talents and industrial needs.

2.3 Policy Implementation Mechanism

The implementation mechanism of the science and technology talent policy in Baotou mainly includes three aspects: policy publicity, policy implementation and policy supervision. Policy publicity through a variety of channels and ways to improve the awareness of the policy and influence; the relevant departments and agencies are responsible for the implementation of policies to ensure the effective implementation of policies; Through the establishment of evaluation and feedback mechanisms, policy supervision can find and solve problems in policy implementation in a timely manner. Through this series of implementation mechanisms, the policy of scientific and technological talents in Baotou has been effectively promoted, providing strong support for local scientific and technological innovation and economic development.

3. Theoretical Basis of Science And Technology Talent Policy

3.1 Overview of Talent Theory

Talent theory is an important part of modern economics and management, involving human capital theory, talent flow theory and talent motivation theory. Human capital theory, proposed by economists such as Schulz and Becker, holds that talent is the key element of economic growth, and education and training

are important means to improve human capital. Schulz (1961) pointed out that education and training can not only increase the productivity of individuals, but also promote the economic development of the whole society. Becker (1964) further emphasized the return on investment in human capital, arguing that investment in education and training can bring long-term economic gains.

The theory of talent mobility focuses on the flow of talent between different regions and organizations and its impact. According to this theory, talent flow is the result of market mechanism and is affected by many factors such as supply and demand, salary level and working environment. Stoll (1980) proposed that talent flow can not only optimize the allocation of resources, but also promote the diffusion of knowledge and technology, thus promoting the development of regional economy.

Talent motivation theory discusses how to attract and retain talents through incentive mechanism. Herzberg's (1959) two-factor theory points out that motivating factors (such as sense of accomplishment, recognition, and the challenge of the job itself) and health factors (such as salary, working conditions, and company policies) in the work together affect employee job satisfaction and performance. Effective incentive mechanism can improve the enthusiasm and creativity of talents, thus enhancing the competitiveness of the organization.

3.2 Relationship Between Scientific and Technological Innovation and Economic Development

Scientific and technological innovation is an important driving force for economic development. Schumpeter (1934) put forward the innovation theory that innovation is the core driving force of economic growth, and enterprises can gain competitive advantages through technological innovation, so as to realize the improvement of economic benefits. Scientific and technological innovation can not only improve production efficiency, but also give birth to new industries and new markets, and promote the optimization and upgrading of the economic structure.

In recent years, with the deepening of globalization and informatization, scientific and technological innovation has played an increasingly prominent role in economic development. Freeman (1987) pointed out that the construction of a national innovation system is crucial to enhance national competitiveness. the national innovation system includes multiple entities, such as scientific research institutions, universities, enterprises and governments, to promote scientific and technological innovation and technology transfer through collaborative cooperation.

The influence of scientific and technological innovation on regional economic development can not be ignored. According to the regional competitiveness theory put forward by Porter (1990), the development of regional economy depends on the improvement of innovation ability. Through the introduction and training of high-level scientific and technological talents, the region can enhance the ability of independent innovation and enhance the competitiveness of the industry, so as to achieve sustainable economic development.

3.3 Policy Evaluation Theory

Policy evaluation is an important part of policy science, aiming at judging the effect and influence of policy implementation through systematic analysis and evaluation. the theory of policy evaluation includes many aspects such as goal oriented evaluation, process evaluation and result evaluation.

Goal-oriented assessments focus on the degree to which policy objectives are achieved. By setting clear policy objectives and performance indicators, it is possible to assess the extent to which policies have achieved their intended effects. Process evaluation focuses on the process of policy implementation and analyzes the problems and challenges in policy implementation in order to adjust and optimize policy measures in a timely manner. the result evaluation evaluates the final effect and influence of the policy through quantitative and qualitative analysis, including economic benefits, social benefits and environmental benefits.

The theory of policy evaluation emphasizes scientificity and objectivity, and requires the evaluation process to be based on reliable data and scientific methods. Through policy evaluation, it can provide scientific basis for policy formulation and adjustment, and improve the effectiveness and sustainability of

policies.

4. Analysis of The Implementation Effect of Baotou Science and Technology Talent Policy

4.1 Policy Effect Evaluation Index System

In order to evaluate the effect of the policy of scientific and technological talents in Baotou, it is necessary to establish a set of comprehensive evaluation index system. the system should include the following aspects:

Quantity and quality of talent introduction: Evaluate the number of scientific and technological talents introduced after the implementation of the policy, as well as quality indicators such as education, professional titles and scientific research achievements.

Talent retention rate: Evaluate the retention of imported talents in Baotou City, including working years, turnover rate, etc.

Output of scientific research achievements: Evaluate the scientific research achievements of imported talents in Baotou, including published papers, applied patents, obtained scientific research projects, etc.

Economic benefits: Evaluate the contribution of scientific and technological talents to the economic development of Baotou City, including the number of new enterprises, the growth of enterprise revenue, tax contribution, etc.

Social benefits: Assess the impact of scientific and technological talents on the social development of Baotou, including employment promotion, technical training, social services, etc.

4.2 Effectiveness of Policy Implementation

Baotou City since the implementation of science and technology talent policy, has achieved certain results. According to the statistics of Baotou Science and Technology Bureau, in the past three years, Baotou has introduced a total of more than 500 high-level scientific and technological talents, including many national experts and scholars. These talents have played an important role in scientific research institutions and enterprises in Baotou City, promoting a number of key technology breakthroughs.

In terms of scientific research achievements, the scientific and technological talents introduced by Baotou City have published more than 300 SCI papers, applied for more than 200 patents, and obtained more than 50 national and provincial scientific research projects. These scientific research achievements not only enhance the scientific and technological innovation capability of Baotou City, but also provide technical support for the development of related industries.

In terms of economic benefits, the introduction of scientific and technological talents has driven the development of high-tech industry in Baotou City. According to the statistics bureau of Baotou, in the past three years, the number of high-tech enterprises in Baotou has increased by 30%, and the added value of high-tech industry has increased by 15% annually. the introduction of scientific and technological talents also promotes the technological upgrading and product innovation of enterprises, and improves the market competitiveness of enterprises.

4.3 Problems and Challenges in Policy Implementation

Although Baotou's science and technology talent policy has achieved some results, it still faces some problems and challenges in the implementation process. First of all, the quantity and quality of talent introduction need to be improved. Although Baotou has introduced a number of high-level scientific and technological talents, there is still a certain gap compared with other domestic scientific and technological innovation cities. Second, the retention rate is not high. Some of the imported talents choose to leave Baotou due to the working environment, living conditions and other reasons, resulting in brain drain.

In addition, the conversion rate of scientific research results is low. Although the scientific and technological talents introduced by Baotou City have made certain scientific research achievements, the conversion rate of these achievements in practical application is not high, and it fails to give full play to its economic and social benefits. Finally, the policy implementation mechanism needs to be improved. Some policies and measures in the implementation of the process of lack of transparency, insufficient implementation and other problems, affecting the implementation of the policy effect.

5. Comparative Analysis: The Experience

Of Science And Technology Talent Policy In Other Regions

5.1 Science and Technology Talent Policies in Other Parts of the Country

Other parts of the country have accumulated rich experience in science and technology talent policy. Taking Shenzhen as an example, Shenzhen has vigorously introduced high-level scientific and technological talents through the implementation of the "Peacock Plan". the program not only provides generous salaries and research funds, but also provides supporting services such as housing and children's education for imported talents, attracting a large number of outstanding scientific and technological talents at home and abroad. According to the data of Shenzhen Science and Technology Innovation Commission, since the implementation of the "Peacock Plan", Shenzhen has introduced more than 5, 000 high-level scientific and technological talents, which has promoted the rapid improvement of scientific and technological innovation and economic development in Shenzhen.

5.2 Experience in International Science and Technology Talent Policy

Internationally, many countries have also achieved successful experience in science and technology talent policies. Take the United States as an example, the United States through the implementation of the "outstanding talent green card" policy to attract the world's top scientific and technological talents. the policy not only provides permanent residency for imported talents, but also provides corresponding welfare benefits for their families, attracting a large number of international scientific and technological talents. According to the National Science Foundation, the United States attracts more than 100, 000 international scientific and technological talents every year, which greatly promotes the United States' leading position in scientific and technological innovation and economic development.

5.3 Inspiration and Reference to Baotou City

Baotou City can learn from the successful experience at home and abroad to further optimize the policy of scientific and technological talents. First of all, we can learn from the experience of Shenzhen, provide more generous salaries and research funds, and attract high-level scientific and technological talents. Secondly, we can learn from the experience of the United States to provide more complete supporting services for imported talents, including housing, children's education, medical security, etc., to improve the quality of life and job satisfaction of talents. In addition, it can strengthen cooperation with domestic and foreign scientific research institutions and enterprises, promote the transformation and application of scientific research results, and enhance the economic and social benefits of scientific and technological talents.

6. Suggestions for Policy Optimization

Under the background of building a model autonomous region in all aspects, the evaluation of the implementation effect of Baotou's science and technology talents policy reveals some deficiencies in the implementation of the policy. In order to further improve the effectiveness of the policy, ensure the stable development of scientific and technological talents and the continuous stimulation of innovation vitality, this section puts forward the following suggestions for policy optimization.

6.1 Improving the Policy Implementation Mechanism

The improvement of policy implementation mechanism is the key to ensure the realization of policy objectives. At present, Baotou City in the process of the implementation of science and technology talent policy, there are problems such as the implementation of different strength, information transmission is not smooth. To this end, it is suggested to establish a multi-sectoral working mechanism to clarify the responsibilities of each department and ensure the consistency and coherence of policy implementation. At the same time, modern information technology should be used to establish a transparent policy implementation monitoring system, real-time tracking of policy implementation, timely detection and solution of problems. In addition, regular training should be conducted for policy implementation personnel to enhance their professional competence and service

awareness to ensure that policies can be effectively implemented.

6.2 Strengthen the Construction of Supporting Measures

The implementation of science and technology talent policy not only needs a good implementation mechanism, but also needs perfect supporting measures as support. Baotou's supporting measures in housing, education, medical care and other aspects are not perfect, which affects the attraction and retention of scientific and technological talents to a certain extent. Therefore, it is suggested to increase the investment in these supporting facilities, especially around the science and technology park, and speed up the construction of high-quality life service facilities to provide convenient living conditions for scientific and technological talents. At the same time, we should optimize the public service system, improve the efficiency and quality of service, and ensure that scientific and technological talents can enjoy high-quality public services.

6.3 Optimize the Talent Service Environment

The optimization of talent service environment is an important way to enhance the satisfaction and loyalty of scientific and technological talents. Baotou still has some deficiencies in talent service, such as cumbersome service process and low service efficiency. Therefore, it is suggested to simplify the service process, improve the service efficiency, and provide more convenient and efficient services for scientific and technological talents. At the same time, a comprehensive talent service system should be established, covering career development, life services, mental health and other aspects to provide all-round support for scientific and technological talents. In addition, we should strengthen cooperation with enterprises, understand the needs of enterprises, provide customized services, help scientific and technological talents better integrate into enterprises, and achieve the common development of individuals and enterprises.

7. Conclusion

Through the evaluation and research of the implementation effect of the policy on scientific and technological talents in Baotou City, we find that although the policy has achieved certain results in attracting and training scientific and technological talents, there are still problems such as imperfect implementation mechanism, insufficient supporting measures, and talents service environment to be optimized. Therefore, this paper puts forward policy optimization suggestions such as improving the policy implementation mechanism, strengthening the construction of supporting measures, optimizing the talent service environment, etc., in order to provide reference for the further improvement of Baotou's science and technology talent policy.

Although this study makes a comprehensive evaluation of the implementation effect of the policy on scientific and technological talents in Baotou City, there are still some limitations due to the limitation of research time and resources. For example, the study was mainly based on existing policy documents and public data, and did not go deep into the field research at the specific implementation level. Future research can go deeper into the implementation level of policies, and obtain more detailed and real data through field research and interviews, so as to improve the depth and accuracy of the research. In addition, with the continuous changes of the policy environment for scientific and technological talents, future research should also pay attention to the dynamic changes of policy implementation, and timely adjust the research direction and methods to maintain the timeliness and foresight of the research.

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