

Regarding the alleviation of professional issues in private manufacturing enterprises in Yunnan Province, China Suggestions for the shortage of technical talents

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ABSTRACT

This paper conducts a systematic study on the long-standing issue of "shortage of professional and technical talent" faced by private manufacturing enterprises in Yunnan Province. It analyzes the underlying causes and practical constraints from multiple dimensions such as development opportunities, salary levels, children's education, housing costs, and geographical location. The research finds that the current structural imbalance between talent supply and demand, insufficient attractiveness of enterprises, and inadequate policy support are key factors leading to the inability to "attract and retain" talent. Based on this, the paper proposes four targeted, systematic, and actionable policy recommendations: First, establishing a tiered and categorized education guarantee mechanism for the children of employees in private enterprises. Second, constructing a housing purchase and rental subsidy system jointly borne by the "government + enterprises". Third, building online cooperation platforms and organizing "University-Enterprise Co-creation" innovation and entrepreneurship competitions to strengthen long-term interaction between enterprises and talent. Fourth, leveraging Yunnan's rich tourism resources to conduct "Attracting Talent to Yunnan" free tourism experience activities targeting college students nationwide. This paper emphasizes that policy design should focus on "visibility" and "effectiveness," using a combination of measures to enhance the overall talent competitiveness of Yunnan's private manufacturing enterprises and provide sustained intellectual support for the high-quality development of Yunnan's manufacturing industry.

KEYWORDS

Yunnan Private Manufacturing; Shortage of Professional and Technical Talent; Alleviation

1. INTRODUCTION

Manufacturing is a pillar industry of the national economy and an important engine for promoting high-quality regional economic development. As an important western province in China, Yunnan's manufacturing industry, especially private manufacturing enterprises, plays an irreplaceable role in promoting employment, driving technological innovation, and industrial upgrading. However, for a long time, private manufacturing enterprises in our province have generally faced the dilemma of a "shortage of professional and technical talent," severely constraining enterprise transformation and upgrading and the enhancement of regional manufacturing competitiveness. According to our recent survey of several private manufacturing enterprises within the province, over 60% of enterprises listed "difficulty in recruiting and retaining professional and technical talent" as their primary challenge. Particularly against the backdrop of increasing downward pressure on the macroeconomy and rising enterprise operational costs, the talent shortage problem has become more prominent and

has become one of the bottlenecks restricting the high-quality development of our province's manufacturing industry. It is worth noting that the scale of college graduates nationwide continues to expand, with the total number exceeding 10 million in 2023, leading to fierce competition in the job market and a "difficulty in finding jobs" problem for a large number of young talents. This provides a rare historical opportunity for our province's private manufacturing enterprises to introduce talent. However, due to relative disadvantages in location, salary and benefits, public services, and other aspects, their attractiveness to high-quality talent is insufficient, making it difficult to convert potential human resources into actual enterprise competitiveness. Therefore, systematically analyzing the causes of the shortage of professional and technical talent in our province's private manufacturing enterprises and proposing practical policy recommendations not only has significant theoretical value but also holds urgent practical significance for promoting the high-quality development of our province's manufacturing industry.

2. ANALYSIS OF THE CAUSES OF THE TALENT DILEMMA IN YUNNAN'S PRIVATE MANUFACTURING ENTERPRISES

2.1. Limited Development Opportunities, Insufficient Career Growth Space

Compared with the eastern coastal areas, the manufacturing industry in Yunnan Province is generally at the lower end of the industrial chain. The scale of enterprises is relatively small and their innovation capabilities are limited, making it difficult to provide a competitive career development platform. Many professional and technical talents, especially graduates from renowned universities, tend to choose large enterprises or technology companies with strong R&D capabilities and clear promotion channels. Most of the private manufacturing enterprises in our province are labor-intensive and have low technological content, making it difficult to meet the expectations of high-quality talents for career growth and self-actualization.

2.2. Low Salary Levels, Lack of Market Competitiveness

Salary level is a key factor affecting talent mobility. Research finds that the salaries offered by private manufacturing enterprises in our province for professional and technical talent are generally lower than the national average, and even less competitive compared to first-tier cities and developed regions. Against the backdrop of continuously rising living costs, the salary disadvantage directly leads to talent outflow, especially technical backbones with certain work experience who are more easily poached by enterprises in other regions with higher salaries.

2.3. Shortcomings in Public Services, Prominent Issues with Children's Education

Children's education is an important factor influencing talent settlement decisions. The basic education resources in our province are generally weak, high-quality educational resources are unevenly distributed, and especially in some industrial parks and county areas where private enterprises are located, educational facilities are severely inadequate. Many introduced talents are concerned that their children cannot receive a good education, thus adopting a cautious attitude towards working and staying in Yunnan.

2.4. High Housing Cost Pressure, Difficulty in Achieving Stable Housing

Although housing prices in some cities in our province are relatively low, the pressure to purchase housing remains significant for young talents just graduating. Furthermore, problems such as an unstandardized rental market and excessively high rental costs as a proportion of income are widespread. "Stable housing" leads to "job satisfaction"; if the housing problem is not effectively resolved, it will directly affect the stability and sense of belonging of talent.

2.5. Remote Geographical Location, Insufficient Locational Attractiveness

Yunnan is located in the southwestern frontier. Although it possesses unique natural and cultural resources, it still lags behind economically developed regions like the Yangtze River Delta and Pearl River Delta in terms of transportation convenience, information access, and industrial agglomeration. Some manufacturing enterprises are located in remote counties and districts, further reducing their attractiveness to talent from outside the province.

3. POLICY RECOMMENDATIONS TO ALLEVIATE THE TALENT SHORTAGE

3.1. Tiered Commitment to Guarantee Education for Children of Private Enterprise Talent

3.1.1. Policy Basis and Necessity

The issue of children's education is a key "soft environment" indicator affecting the mobility of high-level talent. Against the current backdrop of declining birth rates and idle educational resources in some areas, the government has the capacity and necessity to transform educational resources into a strategic tool for attracting talent.

3.1.2. Specific Implementation Suggestions

Construct a basic guarantee tier. For all talent employed in private manufacturing enterprises in our province with an associate degree or higher, regardless of whether they have local household registration, their children are guaranteed admission to public schools during the basic education stage (kindergarten to high school).

3.1.3. High-Quality Resource Tier

For core talent who graduated from domestic TOP 50 universities or world TOP 300 institutions, or hold associate senior titles or equivalent positions in private manufacturing enterprises in our province, commit to their children being admitted to the top 10 public primary and secondary schools in their place of employment. If they choose private schools, the government provides a certain proportion of education subsidies.

3.1.4. Financial Feasibility

This measure will not only fail to increase the financial burden but will also help stabilize the utilization rate of existing educational resources and cope with the impact brought by the decline in school-age population.

3.2. Providing Housing Purchase and Rental Subsidies for Private Enterprise Talent

3.2.1. Policy Background and Opportunity

At present, the inventory of commercial housing in some cities of our province is relatively high. The government can achieve a win-win situation of "reducing inventory" and "attracting talents" by purchasing and storing the existing housing resources and converting them into housing for talent security.

3.2.2. Specific Implementation Suggestions

Purchase Support: For professional and technical talent in private enterprises who have worked in Yunnan for a full 3 years, provide a certain proportion of purchase subsidies or offer interest-subsidized loan support for their first purchase of commercial housing. **Rental Support:** The government uniformly purchases and stockpiles idle market, housing sources, providing "talent

apartments" or rental subsidies to newly introduced talent in private enterprises, with rental standards controlled below 60% of the market price. Fund Sharing Mechanism: Subsidy funds can be jointly borne by the government and enterprises according to a certain ratio, for example, the government bears 70% and the enterprise bears 30%, forming a talent investment mechanism guided by the government with enterprises as the main body.

3.3. Creating "Non-Employment Type" Long-Term Links or Cooperation Channels for Private Enterprises and Talent

Build an online cooperation platform: The platform's function is to establish the "Yunnan Private Enterprise Smart Strategy Platform", where enterprises release their technical demands and project topics, and domestic and foreign talents participate in the research and development through the "challenge and response" approach. Financial incentives: For projects that reach cooperation, the government will provide enterprises with a certain proportion of research and development subsidies, and offer labor remuneration and intellectual property incentives to talents who take on the challenge. Long-term value: Through project cooperation, talents can gain a deep understanding of the enterprise's technical environment and culture, laying a foundation for their future formal employment. Carry out the "university-Enterprise co-creation" type of innovation and entrepreneurship competition: The competition is positioned to solve the practical technical problems of private manufacturing enterprises and organize a special innovation and entrepreneurship competition for college students across the country. Participation mechanism: It is required that the participating teams must pair up with a private manufacturing enterprise in Yunnan Province and carry out technological research and development or management optimization based on the real needs of the enterprise. Win-win for all parties: Students gain practical opportunities and honor incentives, enterprises obtain solutions and potential talents, and the government promotes the integration of industry, academia and research as well as talent reserves.

3.4. Relying on Rich Tourism Resources, Conduct "Attracting Talent to Yunnan" Free Tourism Activities

Policy philosophy and objective: Yunnan boasts unique natural and cultural resources, but they have not been fully transformed into talent attraction. Through the "tourism + talent introduction" model, information barriers can be broken down and the recognition and favorable impression of Yunnan among talents from outside the province can be enhanced. Specific implementation suggestions: The target group is college graduates across the country who have graduated within two years. They can enjoy free admission to five state-owned scenic spots in the province with their student ID cards or academic certificates. In-depth Experience: If you establish contact with private manufacturing enterprises in Yunnan and conduct on-site visits and investigations, it can be extended to free admission to all state-owned scenic spots in the province, and you can bring 1-2 family members along. Long-term mechanism: Integrate tourism experiences with enterprise open days, technical salons, and talent policy briefings to form an integrated talent attraction chain of "tourism - visit - exchange - employment".

4. SAFEGUARD MECHANISMS FOR POLICY IMPLEMENTATION

4.1. Strengthen Organizational Coordination, Form Policy Synergy

It is suggested that the Provincial Party Committee's talent Work Leading group take the lead in formulating detailed implementation rules and assessment mechanisms, with the collaborative participation of multiple departments including industry and information technology, education, human resources and social security, housing and urban-rural development, and culture and tourism, to ensure the effective implementation of the policies.

4.2. Increase financial input and strengthen financial guarantee

Establish the "Special Fund for Talent Development of Private Manufacturing Enterprises in Yunnan Province", integrate various existing talent, science and technology, and industrial support funds, and improve their utilization efficiency.

4.3. Establish a monitoring and evaluation system and dynamically optimize policies

Build a linked database of "talent introduction - enterprise development - regional economy", regularly assess the implementation effect of policies, and promptly adjust and optimize policy measures.

4.4. Strengthen publicity and promotion to enhance the visibility of policies

Through national media, college employment websites, social media and other channels, widely publicize Yunnan's talent attraction policies and environment, and shape the public image of "Yunnan loves talents and Yunnan is suitable for business".

5. CONCLUSION

The shortage of professional and technical talents in private manufacturing enterprises in Yunnan Province is the result of the combined effect of multiple factors and must be addressed through a systematic and precise policy combination. The four suggestions put forward in this article - education as a safety net, housing support, platform construction and tourism talent attraction - not only take into account the actual needs of talents, but also combine the resource endowment and development stage of Yunnan.

Against the backdrop of the increasingly fierce "battle for talent", policies should not only be "forceful" but also "visible". Only with the determination of "if one does not make a sound, one will make a stunning sound" and launch a series of policy measures can we truly attract and retain more professional and technical talents, providing a solid support for the high-quality development of private manufacturing enterprises in our province.

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