Abstract—Under the circumstances of the rapid development of knowledge based economy and artificial intelligence, talents are one of the most important resources not only for the local economic and social development, but also of great significance to the development of the region. Since the establishment of the special economic zone in Zhuhai, many policies concerning talents have been implemented, and some of the policies have achieved desired results. However, in the face of the current new situation, new opportunities, and new challenges, especially when the total number of talents is much lower than the demand, the existing policies in the Bay Area cities, Hong Kong, Shenzhen, Guangzhou, and other places, still need to be continuously improved based on the overall strategies and actual needs. Using the current situation of the talent enticement policy in Zhuhai City as the starting point, taking the enticement convenience, material benefits, incentive policies and flow mechanisms as measurement factors, combined with the data collection and analysis results, to explore the current situation of the talent enticement policy in Zhuhai City and its main stakeholders’ satisfaction, and propose corresponding improvement countermeasures.

Index Terms—talent enticement, System and policy, Policy satisfaction, Guangdong-Hong Kong-Macau Greater Bay Area

I. INTRODUCTION

Since the reform and opening-up, China’s economy has developed by leaps and bounds. As one of the leading cities of reform and opening-up, special economic zones, Guangdong Free Trade Pilot Zone, Hong Kong-Zhuhai-Macau Bridge, Guangdong-Hong Kong-Macau Greater Bay Area, a series of national strategic planning is closely linked to the city of Zhuhai. This is certainly a very precious opportunity for Zhuhai. At the same time, challenges coexist, including fierce competition for talents.

Talents are the main resource for development. Whether the policies for enticing talents into a region are effective or not, and the satisfaction level of the stakeholders determines whether the actual development plans and deployments can be implemented is an important prerequisite for Zhuhai. The goal of building a vanguard zone for the integration and interactive development of the east and west sides of the Pearl River Estuary is of great significance. Therefore, to truly realize the value of talents, make good use of talents, improve talent efficacy, improve talent management systems, and improve talent work mechanisms are all the key points of talent related work.

With the repositioning of the strategic pattern and the transformation of the knowledge economy, to attract more talents to devote themselves to the construction of Zhuhai, the Zhuhai Municipal Party Committee and the Municipal Government have successively promulgated the "Interim Measures for Encouraging Overseas High-level Talents to Start Businesses and Bringing in Foreign Intelligence" in recent years. "Zhuhai City High-level Talents Innovation and Entrepreneurship Support Measures", "Zhuhai City Interim Measures for the Management of Introducing Innovation and Entrepreneurship Teams", "Zhuhai City High-level Talent Housing Guarantee Measures", “Concerning the implementation of several measures of The Implementation of the ‘Zhuhai Elite Talent Plan’ to Accelerate the Gathering of Innovative and Entrepreneurial Talents in the New Era (for trial implementation)”, as well as "Zhuhai City Doctoral and Post-Doctoral Talent Innovative Development Implementation Measures". The government agencies have also actively carried out comprehensive related measures.

At the same time, the population of Zhuhai is also growing. Judging from the permanent population of cities in Guangdong Province in the Guangdong-Hong Kong-Macau Greater Bay Area at the end of 2018, announced by the Guangdong Statistics Bureau, Zhuhai’s total permanent population growth ranked fourth, approximately 125,700 people (Fig. 1), and the growth rate ranked first, with a growth rate of 7.1% (Fig. 2).

Statistics released by Zhuhai City show that in the ten years from 2008 to 2018, the permanent population of Zhuhai City has increased by about 380,000, or 25%, but in the past five years, it has increased by about 301,000, or 19% [1]. To a certain extent, this is closely related to

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the opening of special economic zones and the enticement of talents.
Conduct an in-depth literature discussion based on the background, motivation, and goals of this topic research.

Figure 1. The total increase in permanent population of cities in Guangdong (the Guangdong-Hong Kong-Macao Greater Bay Area) at the end of 2018

Figure 2. The growth rate of permanent resident population in cities in Guangdong (Guangdong-Hong Kong-Macao Greater Bay Area) at the end of 2018.

II. INITIAL REVIEW OF LITERATURE

A. Enticement Convenience

Facilitating the enticement convenience refers to the fact that the government provides convenient conditions for talents, attracts and retains students as a reserve force, hires talents with generous remuneration, develops headhunting services and builds talent networks, expands the scope of talent selection, and directly recruits or trains talents through multinational companies, as well as methods to select, use, cultivate and retain talents through scientific and technological exchanges and cooperation [2]. Therefore, a flexible talent introduction mechanism with dynamic selection of talents, implement flexible personnel policies, and broaden talent introduction channels [3].

B. Talent Material Benefits

Talent material benefits mainly include two levels of physiological needs and safety needs. The policy design itself must not only consider the needs of national and social development, but also fully consider whether the various needs of the implementation objects can be met to promote the realization of the goals more effectively [4].

C. Talent Incentive Policy

Motivation is not only the process of motivating or cultivating people’s work motivation and urging people to achieve the goals of a group or organization to enhance their behavioural efforts [5]; but also, is to push people to work towards a certain direction and level. A certain kind of activity, and the motivation for continuous effort at work. Some scholars have also put forward the hypothesis of unconscious work motivation research [6]. Not all work motives are conscious, and individuals can take hard work without realizing their own motives and behavioural value [7].

D. Talent Flow Mechanism

Talent mobility refers to the active mobility or conversion of talents between different positions, occupations, industries, regions, and countries. It is an inevitable phenomenon of the continuous development and refinement of social division of labour [8]; Talent mobility is also a main way of adjusting the structure of human capital allocation, one of its goals is to improve the efficiency of human capital allocation [9]. Construction of Talent flow mechanism is beneficial to talents [10]. A reasonable flow platform can reduce the resistance to the flow of talents. It can study its theoretical basis from the perspectives of talent flow at the individual level, talent flow at the organizational level, and talent flow at the social level.

E. Satisfaction of Talent Enticement Policy

Both material incentives and spiritual incentives to retain talents, it is necessary to achieve both "reward retention" and "emotional retention and career retention" instead of institutional mobility. Restrictions [11]. Reforming the traditional household registration management system is conducive to the flow of talents. The rigid household registration system has increasingly obvious disadvantages to the rational flow and development of human resources, which has discouraged the enthusiasm for the flow of talents, and greatly reduced the level of talents’ satisfaction with policies [12].

III. RESEARCH METHODOLOGY

This research mainly uses anonymous questionnaire surveys, with corporate employees who meet the criteria of fourth to ninth categories in the "Catalogue of Approval Conditions for Talent Enticement of Zhuhai (2018)" as the survey subjects.

Based on this research model (Fig. 3), we explored the current efficacy of Zhuhai’s current talent enticement
policies. It also explores the questionnaire design for four dimensions of the convenience [13] provided in the talent enticement program, the material benefits for the talents [13, 14, & 15], the talent incentive policy [13] & [16], and the talent flow mechanism [14] & [15] and studies the satisfaction of Zhuhai’s talent enticement policy [13] & [17] among the main stakeholders (Table I).

Figure 3. Conceptual research model with hypotheses

### Table I. Questionnaire Design

<table>
<thead>
<tr>
<th>Variable Factor</th>
<th>Questionnaire</th>
<th>Adopted From</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enticement convenience</td>
<td>Satisfaction of the talent’s living environment, Assistance in the employment of the talent’s spouse, Assistance in the enrolment of the talent’s children,</td>
<td>[17]</td>
</tr>
<tr>
<td>Talent material benefits</td>
<td>Assistance in the talent’s income security, Assistance in the talent’s working environment,</td>
<td>[17]</td>
</tr>
<tr>
<td>Independent</td>
<td>Attention in providing allowance to the talent,</td>
<td>[17]</td>
</tr>
<tr>
<td>Talent Incentive policy</td>
<td>Attention in the talent’s income security,</td>
<td>[17]</td>
</tr>
<tr>
<td>Talent flow mechanism</td>
<td>Attention in the talent’s income security,</td>
<td>[17]</td>
</tr>
<tr>
<td>Dependent</td>
<td>Attention to the flexible household registration system, Development and stable personnel management mechanism,</td>
<td>[17]</td>
</tr>
<tr>
<td>Satisfaction of Talent Enticement Policy</td>
<td>The municipal talent market mobility package,</td>
<td>[17]</td>
</tr>
</tbody>
</table>

### IV. RESULTS

A. Descriptive Statistics from Final Survey

The sample size of this questionnaire using 5-point Likert scale is calculated according to the sampling method \( n = \frac{Z^2(e)^2}{(p)(q)} \) and the minimum sample size is 134 with 95% confidence and 8% allowable error calculation; and then the “snowball” method was used for data collection. A total of 136 questionnaires were distributed, 136 were collected effectively, and the effective feedback rate was 100%. (See Table II)

### TABLE II. SUMMARY OF 136 SAMPLE RESPONDENTS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Information</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>Face to Face</td>
<td>35</td>
<td>25.7</td>
</tr>
<tr>
<td></td>
<td>Online</td>
<td>101</td>
<td>74.3</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>73</td>
<td>53.7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>63</td>
<td>46.3</td>
</tr>
<tr>
<td>Age</td>
<td>30 or below</td>
<td>77</td>
<td>56.6</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>49</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>41-50</td>
<td>9</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Above 50</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Education level</td>
<td>Secondary or below</td>
<td>50</td>
<td>36.7</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree</td>
<td>70</td>
<td>51.5</td>
</tr>
<tr>
<td></td>
<td>Master’s degree or above</td>
<td>16</td>
<td>11.8</td>
</tr>
</tbody>
</table>

Total 136 100

Note: 136 valid data with 100% response rate

B. Reliability test and Factor Analysis

The questionnaire of this study set a total of 24 questions have a factor load greater than 0.5, indicating that the research meets the requirements for continued discussion. In component 1 (Table III), the total number of eigenvalues is 16.486, the variance percentage is 68.691%, the reliability α coefficients are 0.953, 0.929, and 0.923 for Satisfaction of Talent Enticement Policy, Talent material benefits, and Talent Incentive policy respectively; the total number of eigenvalues in component 2 is 1.288, the variance percentage is 5.366%, and the reliability α coefficients are 0.905 and 0.939 for Enticement convenience and Talent flow mechanism respectively. The cumulative percentage of the two components is 74.057%, indicating that there are still about 26% that cannot be explained. From the analysis results, the question design of the questionnaire is sufficient to support the importance of each factor in the subject research (Table III).

### C. Correlation Test

The relationship between the various factors is measured by the Pearson correlation coefficient. The correlation coefficient (Table IV) between Enticement convenience; Talent material benefits; Talent Incentive policy; Talent flow mechanism and Satisfaction of Talent Enticement Policy are 0.728, 0.776, 0.809, and 0.810 respectively. From the results of data analysis, it can be
concluded that there is a significant strong positive correlation between the respective independent variables and the dependent variables, with a confidence level of 99% [18].

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>r**</th>
<th>β*</th>
<th>Research Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Enticement convenience and the satisfaction of the talent policy</td>
<td>0.810</td>
<td>0.280</td>
<td>Support</td>
</tr>
<tr>
<td>H2: Material Benefits of talents and the satisfaction of the talent enticement policy</td>
<td>0.728</td>
<td>0.161</td>
<td>Support</td>
</tr>
<tr>
<td>H3: Talent incentive policy and the satisfaction degree of the talent enticement policy</td>
<td>0.728</td>
<td>0.205</td>
<td>Support</td>
</tr>
<tr>
<td>H4: Talent flow mechanism and the satisfaction of the talent enticement policy</td>
<td>0.776</td>
<td>0.245</td>
<td>Support</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level**

**Regression is significant at the 0.05 level**

D. Regression Analysis

Table V shows that the R-square value of the analysis model is 0.795, which means that the four factors of enticement convenience, material benefits, incentive policy and flow mechanism achieved 79.5% of policy satisfaction. βs of Enticement convenience, Talent material benefits, Talent Incentive policy and Talent flow mechanism are 0.205, 0.161, 0.245 and 0.280 (p<0.05), indicating that the four factors explain the positive effectiveness of the regression equation for policy satisfaction, and its confidence level reaches 95%. As a result, the rank in strength of the positive relationship from linear regression model is the same as the correlation test.

E. Hypothesis Testing by Using Correlation and Regression Analysis

It shows the variables’ relationship in the previous part. Having combined the outcomes of the correlation and regression models, it will show the outcomes of correlation and regression analysis used to test hypotheses in Fig. 4.

![Figure 4. Research Model with Analysis Results](image)

To sum up, in the research hypotheses of this subject, the four hypotheses of the positive relationship between the four factors and satisfaction are established. The strongest positive linear relationship between Talent flow mechanism and the satisfaction of the talent enticement policy (H4) among four factors at 95% confidence level. The specifics are as follows: Table V shows.

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

According to the survey, the most significant variable in the enticement convenience factor and satisfaction is that the "policy attaches importance to the enrolment of children of talents", with a significant correlation coefficient of 0.728, which is a highly correlated relationship. Among the material benefits factor, the variable that has the most significant relationship with satisfaction is "policy values working environment for the talent", with a significant correlation coefficient of 0.776, which is indicate a highly correlated relationship. Some scholars have found that improving the working and living environment for the talents will improve the satisfaction toward the policy. Among the Incentive Policy factors, the variable "Policy Emphasizes Talent Training" has the most significant relationship with satisfaction, with a significant correlation coefficient of 0.809, which indicates a highly correlated relationship. In its correlation analysis, the significant coefficient between this factor and policy satisfaction is 0.810, showing that there is a high correlation with policy satisfaction, and this variable is also the most significant variable related to satisfaction among all the variables of the flow mechanism factor.

B. Recommendations

With the implementation of the Guangdong-Hong Kong-Macau Greater Bay Area Strategic Plan, the sources and methods of talent will be different from the original enticement model of the traditional Pearl River Delta region. Therefore, it is necessary to break the inherent barriers in policies. This study repeatedly verifies and analyses the design framework and hypothesis and makes following recommendations based on the analysis results.

1) Enhance the enticement convenience measures

Today, when the phenomenon of cross-regional and even cross-country talent flows is becoming more and more prevalent, it is necessary to effectively attract and retain talents, and to solve their "problems", so that talents can truly "live and work in peace and contentment", the settlement (procedures) and employment of talents’ spouses, as well as children's school enrolment are important factors. In terms of children’s school enrolment, policies can give appropriate incentives and planning to guide schools to provide convenient and preferential treatment for the enrolment of so-said children. It can also broaden the channels for the enrolment of the children through “enterprise-school cooperation” programs. About the employment of the spouses, it is more difficult to obtain satisfactory results. It is more a matter of a display of a positive attitude and respect to the talents. At the policy level, guaranteeing the settlement of spouses of the talents is a basic prerequisite. Different employment assistance channels or targeted training opportunities can be provided for them. At the same time, relevant overall planning will be given at the level of institutions.
receiving talents and the level of market employment assistance institutions. Provide personalized convenience and guidance for the employment of talents’ spouses and guarantee it from the policy level [19].

2) Consolidate the basis of material benefits

To further improve the income security of the talents, reflecting the value of talents and enhance their sense of belonging, the government can set minimum income guarantees for various types of talents in terms of housing guarantees, technical allowances, special allowances, and other material benefits from the policy level, while targeting different types of talents with differentiated allowances and relocation allowance.

From the perspective of retaining talents and inspire the enthusiasm of talents, establishing an effective income distribution mechanism for retaining and employing talents is vital. From the policy level, it should guarantee that different types of talents can get rewards that match their contribution and value. The salary system and incentive mechanism such as innovation rewards, social security, medical benefits, etc. need to be constantly refined as needs arise. In addition, according to different types of talents, corresponding social security policies should be formulated for different levels of needs, and truly reflecting the social and market value of talents [20]. Only an effective protective mechanism can better attract and retain talents and release the true potential of the talents [21].

3) Improve the incentive policy system

Studies have shown that companies tend to focus on the utilization of talents, but ignore training, mainly because of concerns about their investment and cost control and brain drain. Therefore, according to the nature of different positions and professional requirements, the length of training can be stipulated in the policy, while appropriate subsidies can be given to the corporations, the resources of various institutions can be integrated, and active participation should be encouraged.

The establishment of a scientific, sound, and effective talent classification and evaluation mechanism is of great significance to attract, cultivating and retaining talents. It will stimulate innovation, enhance career and business development, and promote enthusiasm among the talents. Continuous progress and comprehensive development can be the force behind talents’ continuous learning. The policy formulation is based on the principles of fairness, openness, justice, objectivity, effectiveness, and perpetual improvement. Evaluation indicators should be scientific, as qualitative, and quantitative standards should be consistent; evaluation methods should be holistic, and planning operations should be well-coordinated; evaluation systems should be updated as required, and systems should go hand in hand with the policies [22].

4) Improve the level of flow mechanism

To unblock talent flow channels, eliminate restrictions on talent flow, break the barriers across the cities and provinces, to start with the reform of household registration and personnel file management system, so that we can develop market supporting service systems, which will encourage personnel agency business, promote talent market information exchange, and advocate that the talents can come and go freely. Only when the channels for the flow of talents are unblocked can it be truly effective to attract talents. The flow of talents does not equate brain drain. It is precisely because of the more comprehensive protection exist that talents can be better retained; on the contrary, if the mechanism is not sound, it is not sufficient to attractive talents in the first place [23], [24].

To better retain and use talents, it is necessary to effectively integrate protective measures: fair employment, effective reward system, protection of employees’ rights and interests and a good working environment. Combining a comfortable living environment with and conducive working mechanism would the cities become places of emotional attachment—a binding reason for the retention of talents. It is imperative for policy makers to constantly update and refine their policies according to regional development and keep up with the changes of the times.

Overall, Zhuhai’s talent enticement policy among the interviewees is not only relevant to the research but it also reflects that there is room for improvement in some areas, especially material benefits, and flow mechanism. To improve security is to achieve the purpose of attracting, using, cultivating, and retaining talents well [25].

In terms of policies, we must think globally and integrate them organically. It is wise to steer clear of both isolationism and overall planning, and avoid rushing for quick success, but build long-term mechanisms, pay attention to talent bias, and implement coordinated governance.

C. Limitations and Further Research

In view of the limitations of this research, it is planned to expand the types of talent categories, types of institutions and the coverage of industries in the follow-up research; in addition, the sample size of this research is 136 samples, and the subsequent research can appropriately increase the number of interviews to improve the accuracy of the research [26].

In the process of the questionnaire survey, the number of individual interviews is far less than the questionnaire feedback from the Internet, and it is impossible to ensure that the interviewees correctly understand the questions and answer truthfully. Therefore, in the follow-up research, try to increase the use of face-to-face interviews to reduce the source of feedback collected online to better ensure the accuracy and completeness of the collected data [27].

CONFLICT OF INTEREST

The author declares no conflict of interest.

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