

ANALYSIS OF REGIONAL COMPREHENSIVE FACTORS ON TALENT ACQUISITION BASED ON ASA THEORY: A STRUCTURAL EQUATION MODEL

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Available Online: December 2024
Revised: October 2024
Accepted: October 2024
Received: November 2024

Volume II Issue 4 (2024)
DOI: 10.5281/zenodo.14292715
E-ISSN: 2984-7184
P-ISSN: 2984-7176
<https://getinternational.org/research/>

Abstract

This study explores the impact of regional comprehensive factors on talent acquisition using the ASA (Attraction-Selection-Attrition) theory within the context of the automotive industry, employing a structural equation modeling approach. Analyzing data from 308 respondents, the study identifies significant relationships between regional development pole, industry agglomeration, and regional incentives with various dimensions of talent acquisition, including attraction, selection, and retention. The findings reveal that regional development pole and incentives positively influence talent management processes, whereas industry agglomeration has a detrimental effect. These insights are essential for formulating strategies to enhance talent acquisition and retention in the automotive industry by leveraging regional development and incentive mechanisms while addressing the challenges posed by industrial agglomeration.

Keywords: *Regional Development Pole, Industry Agglomeration, Talent Acquisition, ASA Theory, Structural Equation Model*

Recommended Citation:

Wang, B., Ponce Jr., R. J., Teope, J. C., Ursua, D. S., Gonzalez, J. M. P., Opido, R. J., Villanueva, H. D., & Matias, E. Z. (2024). ANALYSIS OF REGIONAL COMPREHENSIVE FACTORS ON TALENT ACQUISITION BASED ON ASA THEORY: A STRUCTURAL EQUATION MODEL. GUILD OF EDUCATORS IN TESOL INTERNATIONAL RESEARCH JOURNAL, 2(4), 16–35. <https://doi.org/10.5281/zenodo.14292715>

INTRODUCTION

With the implementation of innovation-driven strategies, talent management is playing an increasingly critical role in modern enterprises. This is especially true in technology-driven industries, where the acquisition of top talent is vital for innovation and competitiveness (Li Wei & Zhang Hong, 2023).

The growing imbalance in regional economic development is exacerbating economic inequalities, as emerging technological clusters attract a significant share of high-skilled talent (Autor & Reynolds, 2023). Differences in regional

economic conditions are key factors influencing talent mobility, with more developed regions typically having a stronger pull, leading to the migration of talent from less developed to more developed areas (Zhao Bin & Li Na, 2023; Farndale & Scullion, 2024). Additionally, the unique cultural, economic, and policy environments of emerging markets pose new challenges for talent management strategies, requiring companies to adapt flexibly to local circumstances (Minbaeva & Vaiman, 2023). Therefore, it is essential for both businesses and local governments to collaborate by implementing policies and creating conducive work environments to attract and retain top talent, laying a solid foundation for the sustainable economic development of the region (Wang Qiang & Liu Ting, 2024).

The level of economic development significantly determines an enterprise's ability to attract high-quality talent. Research indicates that economically advanced regions, due to their superior infrastructure and living conditions, are better positioned to attract and retain top talent (Li Ming & Zhang Xiaoyun, 2023; Collings & Mellahi, 2023). Moreover, regional industry clusters can effectively draw in high-skilled talent, thereby enhancing regional innovation capacity (Zhang Hua & Li Ming, 2023). Urbanization also plays a significant role in influencing regional talent attraction; the economic prosperity, convenience of living, and cultural amenities brought about by urbanization give urban areas a distinct advantage in attracting top-tier talent (Wang Qiang & Chen Li, 2024). To address these challenges, governments and businesses should formulate targeted policies to balance talent distribution across regions and promote more equitable regional economic development (Li Xiaofeng & Wang Li, 2023). Effective talent incentive policies not only significantly stimulate regional economic growth but also enhance corporate innovation performance, particularly in high-tech manufacturing sectors (Liu Yang & Wang Fang, 2023).

In summary, regional economic development, industry clusters, and talent incentive policies all play crucial roles in talent acquisition. This paper will utilize the Attraction-Selection-Attrition (ASA) theory and apply a Structural Equation Model (SEM) to comprehensively analyze the impact and pathway relationships of regional economic development, industry clusters, and talent incentive policies on talent acquisition so as to construct a structural equation model. This approach will not only assist enterprises in formulating region-specific talent acquisition strategies but also provide theoretical support for local governments to implement tailored talent policies and plans.

LITERATURE REVIEW

Overview of the Attraction-Selection-Attrition (ASA) Theory.

The Attraction-Selection-Attrition (ASA) theory, proposed by organizational psychologist Benjamin Schneider in the 1980s, explains the interaction between organizations and employees and its impact on organizational culture. The theory consists of three core components: Attraction, Selection, and Attrition (Schneider, 1987). This theory is also significant for regional talent management, assisting local governments and institutions in optimizing talent flow and enhancing regional competitiveness.

Impact of Regional Development Pole on Talent Acquisition.

Regional development pole play a crucial role in the ASA theory, particularly in talent acquisition. Economically developed areas, which offer more competitive working conditions, are better able to attract and select high-quality talent (Chen Wei & Zhang Li, 2023; Collings & Mellahi, 2023). These areas often possess strong economic power and a favorable development environment, giving them a significant advantage in the Attraction and Selection phases of the ASA model by providing ample career development opportunities and high-quality living conditions (Chen Jia & Li Lei, 2023; Morris & McDonald, 2023). However, the high competitiveness and concentration of talent also present challenges of high turnover rates, as increased work pressure can lead to higher attrition (Porter & Ketels, 2024). Additionally, the strong

attractiveness of regional development pole may result in talent drainage from other regions, leading to an imbalanced talent distribution across regions (Wang Qiang & Zhao Min, 2024).

Regional economic development not only relies on capital and labor inputs but is also closely linked to technological progress. Studies have shown that technological advancement is a key factor in improving regional economic efficiency, especially when there is diminishing marginal utility of labor (Chen Jian & Wang Fang, 2024). Johnson and Li (2024) emphasize the importance of technological progress for the development of emerging market regions, suggesting that investing in education and infrastructure can enhance these markets' competitiveness. Capital investment and technological progress are crucial drivers of regional economic growth (Li Minghua & Zhang Wei, 2023; Greene & Hough, 2023). Combining the Cobb-Douglas production function, we can see that labor input, capital, technological advancement, and industry agglomeration are core elements of regional development pole.

Impact of Industrial agglomeration on Talent Acquisition. Industrial agglomeration significantly enhances the attraction of professional talent by concentrating resources and opportunities, especially in technology-intensive industries (Zhang Hua & Li Min, 2023; Chen & Liu, 2023). Industrial clusters typically offer richer innovation resources and networks, which are particularly important for attracting innovative talent. For example, technology parks and high-tech industry clusters attract a large number of high-skilled workers by optimizing the innovation environment and resource allocation (Yang Jing & Wang Qiang, 2024; Liu & Chen, 2024). Manufacturing clusters attract talent by creating numerous job opportunities (Chen Qiang & Li Xiao, 2023; Wang & Yang, 2023), while high-tech and innovation-driven clusters retain top talent by providing specialized R&D facilities and an innovative environment (Liu Fang & Zhao Wei, 2024). Despite the attractiveness of industrial clusters, challenges remain, such as improving living conditions and optimizing policy support (Zhang Jie & Chen Li, 2023; Zhang & Sun, 2023).

Research shows that the agglomeration of the automotive industry significantly enhances a region's ability to attract high-skilled talent. Smith and Zhang (2024) highlight that automotive clusters are highly attractive to top talent but also bring intense competition. Liu Bo and Zhang Qiang (2023) found that agglomeration effects give companies more resources and opportunities in talent selection, but also increase talent mobility. To address the high turnover risk associated with automotive industry clusters, Wang Ning and Zhang Min (2023) suggest that companies should improve employee satisfaction and organizational attractiveness. Wright and Lee (2023) emphasize the need for comprehensive talent management strategies, including offering competitive salaries and career development opportunities, to reduce turnover rates.

Impact of Regional Talent Incentive Policies on Talent Acquisition

Regional talent incentive policies play a significant role in attracting high-skilled workers. Wang Xiaoting and Li Jia (2023) point out that these policies can significantly enhance the attractiveness of a region to top talent, although Smith and Williams (2023) found that the effectiveness of such policies varies by region. Liu Yong and Wang Chao (2024) argue that the ASA theory effectively analyzes the impact of regional industrial policies on talent attraction, selection, and retention. Chen Si and Yang Yang (2023) found that innovative talent incentive policies can reduce the loss of high-skilled workers and enhance corporate attractiveness. Garcia and Roberts (2023) note that the ASA theory explains how regional policies influence organizational culture and talent mobility, thus optimizing policies to achieve effective talent retention. In summary, the combination of regional talent incentive policies and ASA theory provides a new perspective on regional economic development and talent management. By integrating economic and cultural incentives, and tailoring policies to regional characteristics and industry needs, it is possible to achieve long-term talent attraction and effective retention.

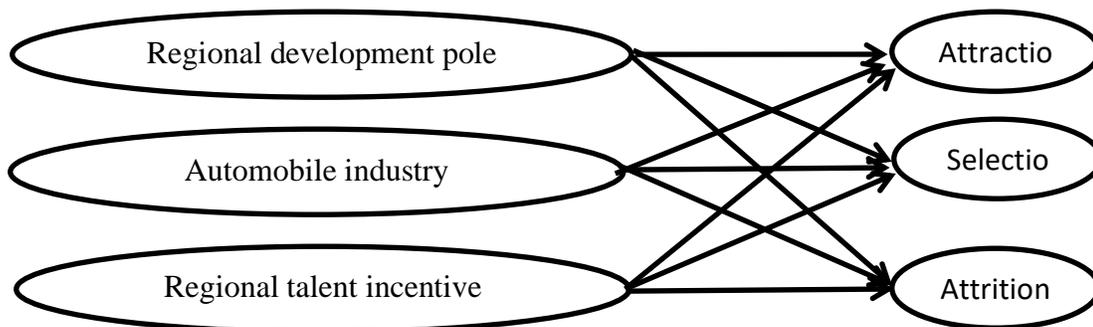
Overall, the Attraction-Selection-Attrition (ASA) theory provides an essential framework for understanding the impact of regional development pole, industrial agglomeration, and talent incentive policies on talent acquisition.

CONCEPTUAL FRAMEWORK

Based on the Attraction-Selection-Attrition (ASA) theory and the literature review on the impact of regional development pole, industrial agglomeration, and talent incentive policies on talent acquisition, the conceptual framework for this study is proposed to testify the path among these variables as follows:

Figure 1

Conceptual framework



STATEMENT OF THE PROBLEM

From above literature review and conceptual framework, this study aims to analyze the path among regional comprehensive factors and talent acquisition so as to construct a structural equation model, using the ASA theory as a foundation. To achieve this, the study will propose and address the following research questions:

SOP1: What is the demographic profile of the respondents?

SOP2: Do regional development pole have an impact on talent attraction, selection, and attrition in the regional automobile industry, respectively?

SOP3: Does automobile industry agglomeration have an impact on talent attraction, selection, and attrition in the regional automobile industry, respectively?

SOP4: Do regional incentives have an impact on talent attraction, selection, and attrition in the regional automobile industry, respectively?

RESEARCH HYPOTHESES

The following hypotheses are proposed in this study:

H01. Regional development pole do not have an impact on talent attraction in the regional automobile industry.

H02. Regional development pole do not have an impact on talent selection in the regional automobile industry.

H03. Regional development pole do not have an impact on talent attrition in the regional automobile industry.

H04. Automobile industry agglomeration does not have an impact on talent attraction in the regional automobile industry.

H05. Automobile industry agglomeration does not have an impact on talent selection in the regional automobile industry.

H06. Automobile industry agglomeration does not have an impact on talent attrition in the regional automobile industry.

- H07. Regional incentives do not have an impact on talent attraction in the regional automobile industry.
- H08. Regional incentives do not have an impact on talent selection in the regional automobile industry.
- H09. Regional incentives do not have an impact on talent attrition in the regional automobile industry.

METHODOLOGY

First, SPSS 26.0 will be used to conduct descriptive and normality analysis of the respondents' demographic profiles, including gender, age, educational background, position, and duration of employment in the enterprise.

Next, SPSS 26.0 will be employed to conduct reliability analysis on the items related to the three latent variables of regional comprehensive factors—regional development pole, automobile industry agglomeration, and regional incentives—as well as the three latent variables of talent acquisition—attraction, selection, and attrition.

Then, Amos 26.0 will be utilized to perform construct validity, composite validity, and discriminant validity analyses on the items corresponding to the three latent variables of regional comprehensive factors and the three latent variables of talent acquisition.

Finally, Amos 26.0 will be used to analyze the structural equation models of the three latent variables of regional development pole, automobile industry agglomeration, and regional incentives, along with the three latent variables of talent acquisition—attraction, selection, and attrition—to test the hypotheses.

POPULATION and SAMPLE

Respondents of study were selected randomly 320 from population 927 employers of vehicle companies in the regions, China from July 12, 2024 to July 23, 2024. All study's respondents were independently and no disturbed to fill in survey questionnaire after their getting knowledge of importance and implication of survey.

INSTRUMENTS OF STUDY

This study is an exploratory research focused on talent acquisition within the region. The survey questionnaire was self-designed based on theoretical literature review and expert consultations. In addition to five demographic profile questions, the questionnaire is divided into two main structures: Regional Comprehensive Factors and Talent Acquisition.

The Regional Comprehensive Factors section includes three latent variables: Regional Development Pole, Automotive Industry agglomeration, and Regional Incentives. The Talent Acquisition section includes three latent variables: Talent Attraction, Selection, and Retention. Five questions were designed for each latent variable as observed variables. Each question uses a four-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree.

According to the normality test results, the survey data conforms to a normal distribution. The following table lists the variable names corresponding to those used in IBM SPSS AMOS 26.0 software:

Table1

Variable Name Correspondences

Latent variable	Abbreviations of latent variable	Abbreviations of observed variable(Question)
regional development pole	Pole	RPD1、RPD2、RPD3、RPD4、RPD5
automobile industry agglomeration	Industry	IA1、IA2、IA3、IA4、IA5
regional incentive	Incentive	RC1、RC2、RC3、RC4、RC5

Attraction	Attract	Attraction1、Attraction2、Attraction3、Attraction4、Attraction5
Selection	Select	Selection1、Selection2、Selection3、Selection4、Selection5
Attrition	Attrit	Attrition1、Attrition2、Attrition3、Attrition4、Attrition5

To avoid unreasonable questionnaire design, eight respondents were initially selected to complete the survey. Reliability analysis was conducted using IBM SPSS 26.0, resulting in a Cronbach's Alpha of 0.958, which is greater than 90%, indicating that the questionnaire design for this study has strong validity (Cortina, J. M. 2023). Subsequently, a large-scale survey was conducted to collect data.

Finally, IBM SPSS AMOS 26.0 was used to perform tests on the reliability, construct validity, composite reliability, convergent validity, and discriminant validity of each dimension of the questionnaire. Based on the test results, adjustments were made to the observed variables (i.e., the questions) to ensure that the entire questionnaire met the standard values. As a result, the questionnaire was optimized and met the usability standards.

After confirming that the survey data passed the normality, reliability, and validity tests, structural equation modeling was analyzed and optimized using IBM SPSS AMOS 26.0. This resulted in a structural equation model with a satisfactory goodness of fit, and the hypotheses were validated.

RESULTS AND DISCUSSION

Description analysis of respondents

Table 2

Status of demographic profile of respondents

Variable	Subject	Frequency	Percent
Gender	Female	127	41.23
	Male	181	58.77
Age	21-30 years old	39	12.66
	31-40 years old	158	51.30
	41-50 years old	91	29.55
	51 and above	20	6.49
Education	Below associate's degree	45	14.61
	Associate's degree	61	19.81
	Undergraduate degree	94	30.52
	Master's degree or above	108	35.06
Position	Other	220	71.43
	Technician	32	10.39
	Engineer	16	5.19
	Manager	32	10.39

	Director or above	8	2.60
Duration	2 year and below	36	11.69
	3-5 years	60	19.48
	6-10 years	69	22.40
	More than 10 years	143	46.43
Total		308	100.0

The total number of respondents is 308, representing 100% of the sample. The demographic profile of the respondents is as follows:

In terms of gender, 58.77% of the respondents are male (181), while 41.23% are female (127).

Regarding age, the largest group of respondents is aged between 31-40 years old, accounting for 51.30% (158). This is followed by those aged 41-50 years old at 29.55% (91), 21-30 years old at 12.66% (39), and those aged 51 and above at 6.49% (20).

In terms of education, the respondents' educational background is diverse, with 35.06% (108) holding a master's degree or higher, 30.52% (94) holding an undergraduate degree, 19.81% (61) having an associate's degree, and 14.61% (45) having an education level below an associate's degree.

Regarding position, the majority of respondents are technicians (10.39% or 32) and managers (10.39% or 32), followed by engineers (5.19% or 16), and directors or above (2.60% or 8).

In terms of duration of employment, 46.43% (143) of the respondents have been employed for more than 10 years, 22.40% (69) for 6-10 years, 19.48% (60) for 3-5 years, and 11.69% (36) for 2 years or less.

Reliability analysis

Table 3

Reliability analysis of dimensions

Latent variable	Cronbach's Alpha	
Regional development pole	0.874	
Automobile industry agglomeration	0.914	0.925
Regional incentive	0.912	
attraction	0.925	
selection	0.898	0.932
attrition	0.932	

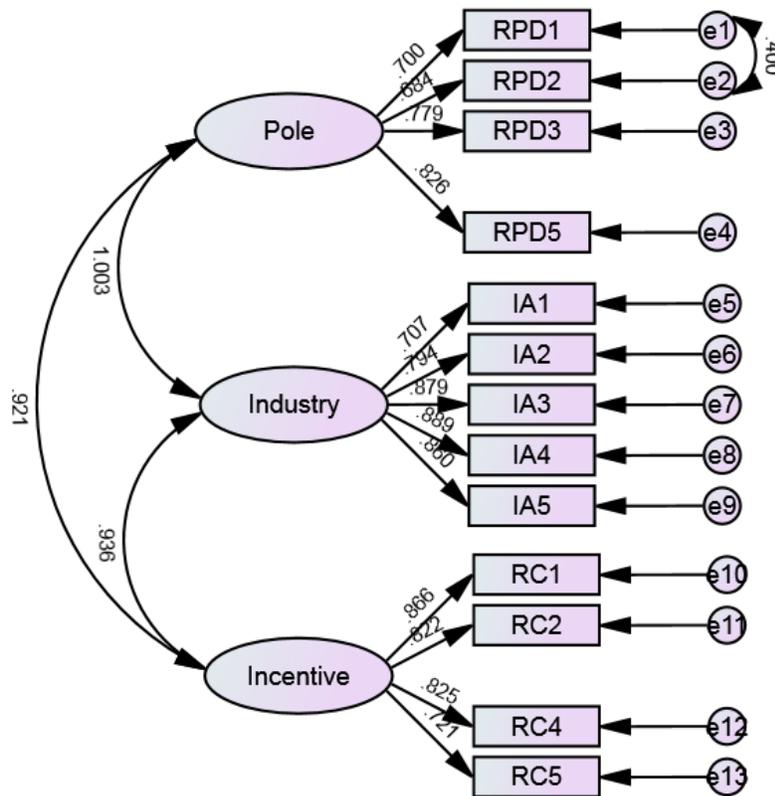
The reliability analysis of the latent variables, assessed using Cronbach's Alpha, indicates strong internal consistency across all constructs. The regional development pole has a Cronbach's Alpha of 0.874, with an additional combined alpha value of 0.925, demonstrating high reliability. The automobile industry agglomeration and regional incentive variables also show excellent reliability, with Cronbach's Alpha values of 0.914 and 0.912, respectively. The attraction variable has a Cronbach's Alpha of 0.925, further supported by an additional alpha value of 0.932, indicating excellent consistency. The selection variable, with a Cronbach's Alpha of 0.898, and the attrition variable, with an Alpha of 0.932, both reflect strong internal consistency. Overall, the measurement scales used in this study are highly reliable, with all Cronbach's Alpha values well above the acceptable threshold of 0.7.

Validity analysis of regional comprehensive factors

Validity analysis was conducted using IBM SPSS AMOS 26.0 software on the three latent variables and their 15 observed variables within the Regional Comprehensive Factors. Due to statistical redundancy between items RPD4 and RC3 with other items in the same dimension, these items were removed. Additionally, the correlation between e1 and e2 was adjusted. As a result, each dimension met the validity standards (details are shown in the table4, table 5 and table 6). The adjusted measurement model is illustrated in Figure 2.

Figure 2

Modificated model of f regional comprehensive factors



Construct validity analysis

Table 4

Indices of construct validity

CMIN/DF	RMSEA	GFI	IFI	TLI	CFI
2.991	0.081	0.923	0.963	0.952	0.962

The construct validity of the model is supported by the following fit indices: CMIN/DF = 2.991, RMSEA = 0.081, GFI = 0.923, IFI = 0.963, TLI = 0.952, and CFI = 0.962. These values indicate an acceptable model fit, with CFI and IFI values above 0.95 suggesting a good fit, and an RMSEA value below 0.08 indicating reasonable approximation error according to model fit criteria (Hu and Bentler. 1999).

Analysis of Composite reliability and convergent validity

Table 5

Composite reliability and convergent validity for regional development pole, regional industry agglomeration and regional incentive

Path			Estimate	S.E.	C.R.	P	AVE	CR
RPD1	<---	Pole	0.700					
RPD2	<---	Pole	0.684	0.06	14.94	***	0.562	0.836
RPD3	<---	Pole	0.779	0.083	13.13	***		
RPD5	<---	Pole	0.826	0.084	13.901	***		
IA1	<---	Industry	0.707					
IA2	<---	Industry	0.794	0.086	13.567	***		
IA3	<---	Industry	0.879	0.081	15.008	***	0.673	0.9158
IA4	<---	Industry	0.889	0.082	15.163	***		
IA5	<---	Industry	0.860	0.083	14.683	***		
RC1	<---	Incentive	0.866					
RC2	<---	Incentive	0.822	0.053	18.284	***		
RC4	<---	Incentive	0.825	0.052	18.402	***		
RC5	<---	Incentive	0.721	0.058	14.844	***		

***: P<0.001

The composite reliability (CR) and average variance extracted (AVE) values indicate good convergent validity for the constructs, which is referred to Hair et al. (2020). For the "Pole" construct, the AVE is 0.562 and CR is 0.836, showing that the construct is reliable and valid. The "Industry" construct has an AVE of 0.673 and CR of 0.9158, also indicating strong convergent validity. The "Incentive" construct has an AVE of 0.657 and CR of 0.8839, further supporting the reliability and validity of the measures. All constructs have factor loadings that are significant (p < 0.001), confirming the strength of the model.

Analysis of Discriminant validity

Table 6

Discriminant validity for regional development pole, regional industry agglomeration and regional incentive

Latent variable	Pole	Industry	Incentive
Pole	0.562		
Industry	0.175***	0.673	
Incentive	0.193***	0.196***	0.657
AVE Square Root	0.750	0.820	0.811

***: P<0.001

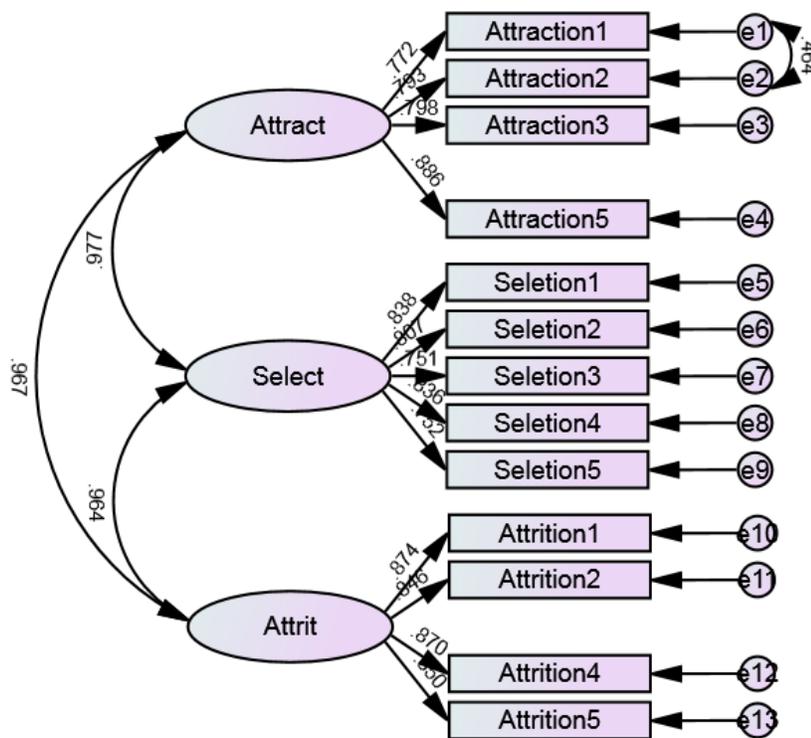
The discriminant validity of the model is confirmed, as the AVE square roots for each latent variable—Pole (0.750), Industry (0.820), and Incentive (0.811)—are all greater than the inter-variable correlations. This suggests that each construct is more closely related to its own measures than to others, meeting the criteria for adequate discriminant validity (Fornell and Larcker, 1981).

Validity analysis of talent acquisition

Similarly, because of statistical redundancy between items Attraction4 and Attrition3 with other items within the same dimension, these items were removed. Furthermore, the correlation between e1 and e2 was adjusted. Consequently, all dimensions met the validity standards (as detailed in Table 7, Table 8, and Table 9). The revised measurement model is depicted in Figure 3.

Figure 3

Modified model of talent acquisition



Analysis of Construct Validity

Table7

Indices of Construct validity

CMIN/DF	RMSEA	GFI	IFI	TLI	CFI
3.307	0.087	0.905	0.961	0.95	0.961

The CMIN/DF value of 3.307 indicates an acceptable model fit, as it is below the threshold of 5. The RMSEA value of 0.087 is within the permissible range (below 0.10), indicating a reasonable error of approximation. The GFI (0.905), IFI

(0.961), TLI (0.950), and CFI (0.961) values all exceed the recommended threshold of 0.90, indicating a good fit between the model and the observed data.

Analysis of Composite reliability and convergent validity

Table 8

Composite reliability and convergent validity for talent attraction, selection and attrition

Path			Estimate	S.E.	C.R.	P	AVE	CR
Attraction1	<---	Attraction	0.772					
Attraction2	<---	Attraction	0.793	0.049	20.61	***	0.662	0.8864
Attraction3	<---	Attraction	0.798	0.065	15.185	***		
Attraction5	<---	Attraction	0.886	0.066	17.34	***		
Selecion1	<---	Selection	0.838					
Selecion2	<---	Selection	0.807	0.054	17.313	***		
Selecion3	<---	Selection	0.751	0.058	15.512	***	0.654	0.8972
Selecion4	<---	Selection	0.836	0.054	18.303	***		
Selecion5	<---	Selection	0.752	0.06	15.547	***		
Attrition1	<---	Attrition	0.874					
Attrition2	<---	Attrition	0.846	0.049	20.159	***	0.740	0.9191
Attrition4	<---	Attrition	0.87	0.048	21.3	***		
Attrition5	<---	Attrition	0.85	0.05	20.344	***		

***: P<0.001

Each construct demonstrates CR values above the recommended threshold of 0.70, specifically 0.8864 for Attraction, 0.8972 for Selection, and 0.9191 for Attrition, confirming the internal consistency of the measures. Additionally, the Average Variance Extracted (AVE) values are all above 0.50, with Attraction at 0.662, Selection at 0.654, and Attrition at 0.740, indicating that a significant proportion of the variance in the indicators is accounted for by the latent variables, which supports convergent validity.

Analysis of discriminant validity

Table 9

Discriminant validity for talent attraction, selection and attrition

Latent variable	Attraction	Selection	Attrition
-----------------	------------	-----------	-----------

Attraction	0.662		
Selection	0.230 ***	0.654	
Attrition	0.230***	0.246***	0.740
AVE Square Root	0.814	0.809	0.860

***: P<0.001

The square root of the AVE values for Attraction (0.814), Selection (0.809), and Attrition (0.860) are greater than the correlations between the constructs, which are 0.230 for Attraction-Selection, 0.230 for Attraction-Attrition, and 0.246 for Selection-Attrition. This indicates that each construct shares more variance with its indicators than with other constructs, thereby supporting discriminant validity.

Test of The normality

Table

10

Descriptive statistic of observed variables

	N	Mean	Skewness	Kurtosis
RPD1	308	3.0682	-0.669	2.285
RPD2	308	3.0682	-0.667	3.182
RPD3	308	3.2435	-0.690	2.607
RPD5	308	3.2727	-0.730	2.499
IA1	308	3.1623	-0.533	1.831
IA2	308	3.1461	-0.519	1.349
IA3	308	3.2110	-0.559	2.162
IA4	308	3.1948	-0.650	2.563
IA5	308	3.2240	-0.771	2.858
RC1	308	3.2597	-0.603	2.202
RC2	308	3.2532	-0.615	1.909
RC3	308	3.3247	-0.754	1.671
RC4	308	3.2727	-0.528	1.578
RC5	308	3.4221	-0.871	1.613
Attraction1	308	3.2370	-0.610	1.607
Attraction2	308	3.2078	-0.481	1.292
Attraction3	308	3.2662	-0.400	1.167
Attraction4	308	3.2597	-0.714	2.468
Attraction5	308	3.2500	-0.711	2.173
Seletion1	308	3.2273	-0.682	2.231
Seletion2	308	3.2597	-0.611	2.084
Seletion3	308	3.1558	-0.351	0.784
Seletion4	308	3.1623	-0.533	1.716
Seletion5	308	3.0844	-0.464	1.082

Attrition1	308	3.1753	-0.836	3.444
Attrition2	308	3.2435	-0.701	2.221
Attrition4	308	3.2240	-0.678	2.260
Attrition5	308	3.1916	-0.735	2.353

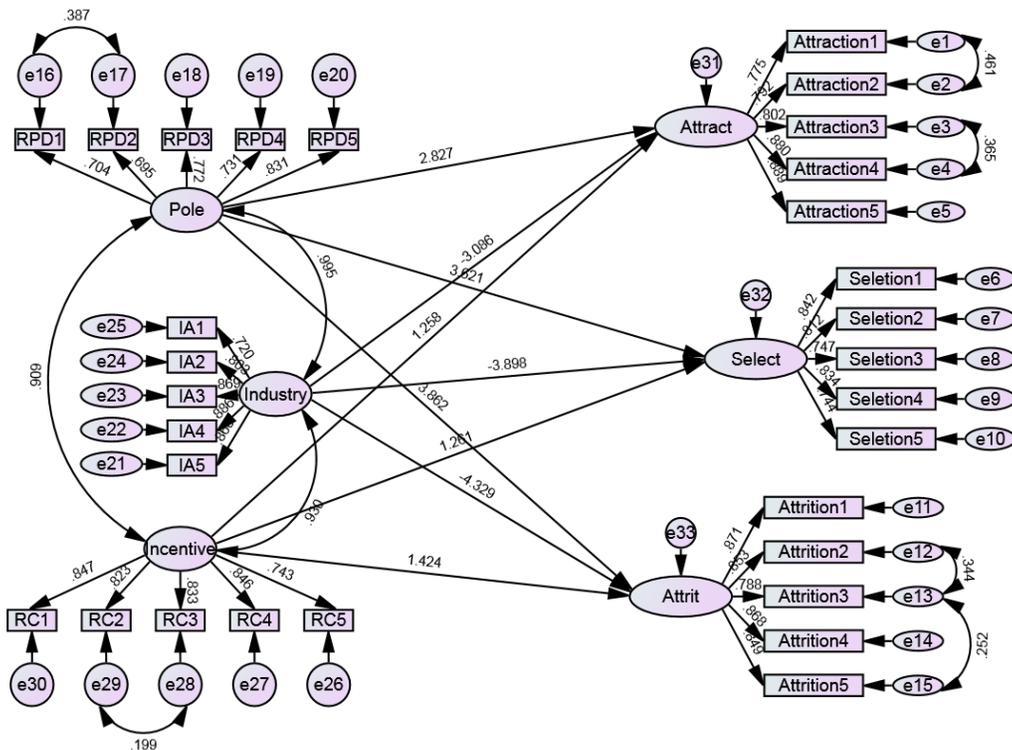
According to the guidelines established by George and Mallery (2010), skewness values within the range of -1 to 1 and kurtosis values within the range of -3 to 3 indicate approximate normality. Excepted from Kurtosis of RPD2 (3.182) and Attrition1 (3.444) more than 3, the results show that most variables fall within these acceptable ranges, suggesting that the data approximates a normal distribution.

Analysis of structural models

Through the aforementioned reliability, validity, and normality tests, we found that the latent variables and observed variables met the conditions for the structural equation model. To ensure data completeness, all observed variables were included in the structural equation model for analysis and adjustment. Ultimately, a model meeting the fit standards was obtained (as shown in the figures and tables), and the null hypotheses were tested according to the p-value criteria.

Figure 4

Modified structural model



9.6.1 Goodness-of-fit analysis

Table 11: The fit indices for the structural model

CMIN/DF	RMSEA	GFI	IFI	TLI	CFI
2.906	0.079	0.806	0.92	0.91	0.92

The fit indices for the structural equation model were assessed as follows: CMIN/DF = 2.906, RMSEA = 0.079, GFI = 0.806, IFI = 0.920, TLI = 0.910, and CFI = 0.920. According to commonly accepted standards, a CMIN/DF value less than 3 indicates good model fit (Kline, 2015). RMSEA values below 0.08 suggest adequate fit, while values below 0.05 indicate a good fit. GFI, IFI, TLI, and CFI values above 0.90 are generally considered acceptable (Byrne, 2016). The results indicate that the model exhibits a reasonable fit to the data, with most indices meeting or exceeding the acceptable thresholds.

9.6.2 Analysis of Path Coefficients and Statistical Significance

Table 12

Path Coefficients and Statistical Significance

Path	Estimate	S.E.	C.R.	P	Interpretation
Attraction <--- Pole	2.827	1.584	2	0.046	Reject H ₀ 1
Selection <--- Pole	3.621	2.123	2.045	0.041	Reject H ₀ 2
Attrition <--- Pole	3.862	2.315	2.016	0.044	Reject H ₀ 3
Attraction <--- Industry	-3.086	1.389	-2.059	0.039	Reject H ₀ 4
Selection <--- Industry	-3.898	1.86	-2.076	0.038	Reject H ₀ 5
Attrition <--- Industry	-4.329	2.032	-2.128	0.033	Reject H ₀ 6
Attraction <--- Incentive	1.258	0.353	3.762	***	Reject H ₀ 7
Selection <--- Incentive	1.261	0.464	3.068	0.002	Reject H ₀ 8
Attrition <--- Incentive	1.424	0.507	3.195	0.001	Reject H ₀ 9

***: P<0.001

The SEM figure illustrates the hypothesized causal relationships between the latent variables. For instance, the influence of Pole on the ASA components underscores the importance of regional development strategies in attracting and retaining talent.

- The negative impact of Industry on Attraction, Selection, and Attrition suggests potential challenges associated with industrial agglomeration, such as increased competition for talent or negative externalities that may reduce a region's attractiveness.
- Incentive policies emerge as critical factors positively influencing all aspects of the ASA process, highlighting their importance in enhancing a region's or organization's ability to attract and retain skilled individuals.

H01: Regional development pole do not have an impact on talent attraction in the regional automobile industry. The path coefficient from Pole to Attraction is 2.827, with a standard error (S.E.) of 1.584 and a critical ratio (C.R.) of 2.000. The P-value for this relationship is 0.046, which is statistically significant at the 5% level (P < 0.05). Therefore, H₀1 is rejected, indicating that regional development pole do indeed have a significant positive impact on talent attraction in the regional automobile industry.

H02: Regional development pole do not have an impact on talent selection in the regional automobile industry. The analysis shows a path coefficient of 3.621 from Pole to Selection, with a standard error (S.E.) of 2.123 and a critical ratio (C.R.) of 2.045. The P-value for this path is 0.041, which is statistically significant. Consequently, H₀2 is rejected, demonstrating that regional development pole have a significant positive influence on talent selection in the regional automobile industry.

H03: Regional development pole do not have an impact on talent attrition in the regional automobile industry.

For the path from Pole to Attrition, the coefficient is 3.862, with a standard error (S.E.) of 2.315 and a critical ratio (C.R.) of 2.016. The P-value is 0.044, indicating statistical significance. As a result, H_03 is rejected, suggesting that regional development pole significantly influence talent attrition, likely reducing it, in the regional automobile industry.

H04: Automobile industry agglomeration does not have an impact on talent attraction in the regional automobile industry.

The path coefficient from Industry to Attraction is -3.086, with a standard error (S.E.) of 1.389 and a critical ratio (C.R.) of -2.059. The P-value of 0.039 indicates statistical significance. Therefore, H_04 is rejected, meaning that automobile industry agglomeration has a significant negative impact on talent attraction in the regional automobile industry.

H05: Automobile industry agglomeration does not have an impact on talent selection in the regional automobile industry.

The analysis indicates a path coefficient of -3.898 from Industry to Selection, with a standard error (S.E.) of 1.860 and a critical ratio (C.R.) of -2.076. The P-value is 0.038, which is statistically significant. Thus, H_05 is rejected, suggesting that automobile industry agglomeration negatively affects talent selection in the regional automobile industry.

H06: Automobile industry agglomeration does not have an impact on talent attrition in the regional automobile industry.

For the path from Industry to Attrition, the coefficient is -4.329, with a standard error (S.E.) of 2.032 and a critical ratio (C.R.) of -2.128. The P-value of 0.033 shows statistical significance. Therefore, H_06 is rejected, indicating that automobile industry agglomeration has a significant negative impact on talent attrition in the regional automobile industry.

H07: Regional incentives do not have an impact on talent attraction in the regional automobile industry.

The path coefficient from Incentive to Attraction is 1.258, with a standard error (S.E.) of 0.353 and a critical ratio (C.R.) of 3.762. The P-value is less than 0.001, indicating high statistical significance. As a result, H_07 is rejected, confirming that regional incentives significantly and positively influence talent attraction in the regional automobile industry.

H08: Regional incentives do not have an impact on talent selection in the regional automobile industry.

The analysis reveals a path coefficient of 1.261 from Incentive to Selection, with a standard error (S.E.) of 0.464 and a critical ratio (C.R.) of 3.068. The P-value is 0.002, which is statistically significant. Consequently, H_08 is rejected, suggesting that regional incentives positively impact talent selection in the regional automobile industry.

H09: Regional incentives do not have an impact on talent attrition in the regional automobile industry.

For the path from Incentive to Attrition, the coefficient is 1.424, with a standard error (S.E.) of 0.507 and a critical ratio (C.R.) of 3.195. The P-value of 0.001 indicates strong statistical significance. Therefore, H_09 is rejected, demonstrating that regional incentives have a significant positive impact on talent attrition, likely reducing it, in the regional automobile industry.

In conclusion, the model demonstrates a good overall fit with the data, as indicated by the CMIN/DF, RMSEA, and other fit indices. The path coefficients reveal significant relationships between the latent variables, with Pole and Incentive positively influencing Attraction, Selection, and Attrition, while Industry has a negative impact on these same variables. These findings suggest a complex interplay between these latent constructs, where the role of Pole and Incentive in enhancing attraction, selection, and retention is counteracted by the adverse effects of Industry. This detailed analysis

confirms the robustness of the hypothesized relationships within the SEM and provides valuable insights into the dynamics at play.

CONCLUSION

The analysis of 308 respondents highlights distinct demographic characteristics and confirms strong internal consistency for the studied constructs, as evidenced by high Cronbach's Alpha values. The construct validity of regional comprehensive factors and talent acquisition measures is supported by favorable fit indices and high values for composite reliability and convergent validity. Despite slight deviations in normality, the overall data distribution remains acceptable.

The structural model reveals significant insights into the impact of regional development pole, industrial agglomeration, and regional incentives on talent management. Regional development pole positively influence talent attraction, selection, and retention, while industrial agglomeration has a negative effect on these factors. Regional incentives, conversely, enhance all stages of talent acquisition.

These findings underscore the importance of focusing on regional development and effective incentive programs to bolster talent management in the automotive industry. Conversely, industry agglomeration poses challenges that need addressing to improve talent acquisition and retention strategies.

RECOMMENDATION

- **Strengthen Regional Development Initiatives:** Enhance regional development by investing in key areas such as infrastructure, education, and public services. These investments can make the region more attractive to skilled professionals, boosting talent retention in the automotive industry.
- **Mitigate Industrial Agglomeration Challenges:** Address the drawbacks of industrial agglomeration, like intense competition for talent and environmental concerns. Initiatives such as innovation hubs or industry-focused training programs can help reduce these challenges and improve the region's overall appeal.
- **Develop Customized Incentive Programs:** Create and refine incentive programs tailored to the specific needs of automotive industry professionals. This could include financial rewards, career advancement opportunities, and other benefits that align with the preferences of the target talent pool.
- **Enhance Talent Recruitment Processes:** Improve the methods used to recruit and select talent in the regional automotive industry by adopting effective practices in recruitment and assessment. This will ensure a higher caliber of professionals within the industry.
- **Implement Strategies to Reduce Talent Turnover:** Design and implement strategies that focus on reducing employee turnover by increasing engagement. Programs that offer professional development, flexible working conditions, and better work-life balance can significantly enhance job satisfaction and retention rates.

ACKNOWLEDGMENTS

This research is awarded by the Provincial Quality Engineering Project of Higher Education Institutions in Anhui Province, under the teaching research project titled "Research on the Talent Training Model for Financial and Accounting Professionals in Higher Vocational Colleges under the Trend of Financial Shared Services - A Case Study of Anhui Business And Technology College." Furthermore, This research also is the part of Key Research Project at the School Level of Anhui Business And Technology College in 2024, which is Research on the Talent Agglomeration Mechanism of Anhui Province's Automotive Industry - Empirical Analysis Based on Regional Development and Automotive Industry (Project Code:SK2024A07). The authors appreciate the support provided by the Provincial Quality Engineering Project of Higher Education Institutions in Anhui Province and Key Research Project of Anhui Business And Technology College.

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