FACTORS AFFECTING COLLEGE STUDENTS ON DECISION-MAKING TO POSTGRADUATE ENTRANCE EXAMINATION IN XIANGTAN CITY

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Abstract

The objectives of this research were: (1) To identify the factors that impact college students' decision-making regarding postgraduate entrance examination in Xiangtan City; (2) To formulate the model factors that play a role in college students' decision-making regarding postgraduate entrance examination in Xiangtan City; And (3) to develop a logistic regression equation for predicting college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

The dissertation utilized a quantitative research approach. The sample size was determined using G*Power software, and a total of 645 college students were randomly selected from 3 public universities in Xiangtan City. The instrument for gathering data was a 5-scale rating questionnaire, with an Item-Objective Congruence (IOC) for each item ranging between 0.6 and 1.0. Additionally, the reliability of each factor fell within the range of 0.74 to 0.81. The data was analyzed using mean, standard deviation, and logistic regression analysis with SPSS software.

The research findings: (1) There were five main factors affecting college students' decision-making regarding postgraduate entrance examination in Xiangtan City, namely academic factors, environment and facilities factors, personal attribute factors, reference group factors, and social economic system factors; (2) The logistic regression model revealed that, except for referent group factors, the other four factors have a significant ($p<0.05$) statistical impact on students' decision-making in Xiangtan City; And (3) the prediction rate of the logistic regression equation for college students' decision-making in Xiangtan City is 15.20%, with the logistic regression equation as follows:

Logistic (Y) = -3.88++0.57(F1)+0.71(F3)+0.68(F5)-0.53(F2)

Keywords: Decision-making, Factors affecting, Logistic regression model

Introduction

In the contemporary educational landscape, the decision to pursue postgraduate studies represents a pivotal crossroads for university students worldwide. This transformative choice is influenced by a complex interplay of various factors, collectively shaping the trajectory of individuals' engagement with higher education. The journey towards postgraduate studies embodies a culmination of personal aspirations, academic accomplishments, socio-economic considerations, and external expectations. Recognizing and comprehending the array of factors that shape college students' decisions regarding postgraduate education is of paramount significance in understanding the subtle nuances of modern education and career development.

At the level of knowledge-based advancement, the quantity and quality of postgraduate students play a pivotal and irreplaceable role in the realization of a nation's strategy for becoming a "talent-strong country" (Chen Zhaoqi, 2016). Within the intricate landscape of China's educational system, the pursuit of higher education has become a cornerstone of modern society. Since 2006, the Chinese Ministry of Education has issued such documents as the "best undergraduate course graduates of common universities across the country nominate an exemption study for a master's degree graduate student work management measure (trial)" and "the general office of the Ministry of Education on further strengthening recommend excellent fresh graduate an exemption to graduate school work notice" to make the postgraduate entrance examination more institutionalized, standardized and scientific. (Jiang Guanglun, & Li Tiehu, 1998). The 19th National Congress has also repeatedly emphasized that China's graduate education should change from the expansive development focusing on scale growth to the connotation development focusing on the quality of talent training (Ding Xiaochang, 2012). It can be seen that graduate education undertakes the historical mission of cultivating talents, and it has become the consensus of all colleges and universities that high-quality graduate students are conducive to improving the quality of graduate talent training.

With the rapid advancement of science and technology and the continuous deepening of market economy, the demand for high-quality, knowledgeable talent has become increasingly urgent. High-level elites have emerged as indispensable drivers of societal progress. In response to the requirements of economic and social development, the expansion of postgraduate enrollment has been actively promoted. Postgraduate education has become an integral part of mass education, and pursuing postgraduate studies has gradually become a significant choice for undergraduate graduates.

According to statistics from the Ministry of Education, in 1998, the number of postgraduate students in China was 150,000 for master's students and 50,000 for doctoral students (Yin Xue, 2003). In 2017, the number of candidates registering for the postgraduate entrance examination surpassed 2 million for the first time (Ministry of Education, 2016). In 2020 and 2021, the registered number of master's students reached 3.41 million and 3.77 million, respectively, showing a growth rate of 10.6% (Sang Shan, Song Shiru, 2019).

The formation of the "postgraduate entrance examination fever" is not only a rational choice made by college students to alleviate employment pressure and enhance their employability, but it could also be a utilization of the "signal mechanism" provided by higher education to achieve individual aspirations for upward mobility and attain higher social status (Xiong Nijuan, Zhao Donghui, & Shi Zulin, 2005). Thus, the fact that the population of postgraduate entrance examination candidates has grown to such a significant scale not only constitutes a cultural and educational phenomenon in contemporary China but also raises a pressing societal issue that requires widespread attention.

The research context behind Chinese students' decisions to pursue postgraduate studies is a multidimensional narrative that intertwines cultural influences, economic considerations, familial expectations, and educational policies (Cai Yinghui, 2010). China's distinctive educational environment, characterized by the formidable experience of the national college entrance examination (Gaokao) and the significance of university prestige, adds layers of complexity to this narrative. This study focuses on students from three public universities in Xiangtan City (which has only three public universities), conducting a questionnaire survey to analyze the current state of students' decisions to pursue postgraduate studies and the factors influencing these decisions. Through an in-depth examination of these factors, we aim to uncover the motivations driving students' choices to pursue postgraduate studies, the challenges they encounter, and the underlying influencing elements. This exploration not only enriches our understanding of the educational landscape but also provides the basis for institutions and policymakers to devise targeted strategies. It also assists in guiding students to make informed decisions, facilitating their transition to postgraduate education and offering valuable insights for a greater number of university students.

Research Questions

1 What factors influence college students' decision-making regarding postgraduate entrance examination in Xiangtan City?

2 What are the model factors that constitute the model influencing college students' decision-making regarding postgraduate entrance examination in Xiangtan City?

3 How can the model factors influencing college students' decision-making regarding postgraduate entrance examination in Xiangtan City?

Research Objectives

1 To identify the factors that impact college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

2 To formulate the model factors that play a role in college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

3 To develop a logistic regression equation for predicting college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

Research Hypothesis

H1: Academic factors (AF) have a positive and direct impact on college students' decision-making regarding postgraduate entrance examinations in Xiangtan City.

H2: Environment and facilities factors (EFF) have a positive and direct impact on college students' decision-making regarding postgraduate entrance examinations in Xiangtan City.

H3: Personal attributes factors (PAF) have a positive and direct impact on college students' decision-making regarding postgraduate entrance examinations in Xiangtan City.

H4: Reference group factors (RGF) have a positive and direct impact on college students' decision-making regarding postgraduate entrance examinations in Xiangtan City.

H5: Social economic system factors (SESF) have a positive and direct impact on college students' decision-making regarding postgraduate entrance examinations in Xiangtan City.

Conceptual Framework

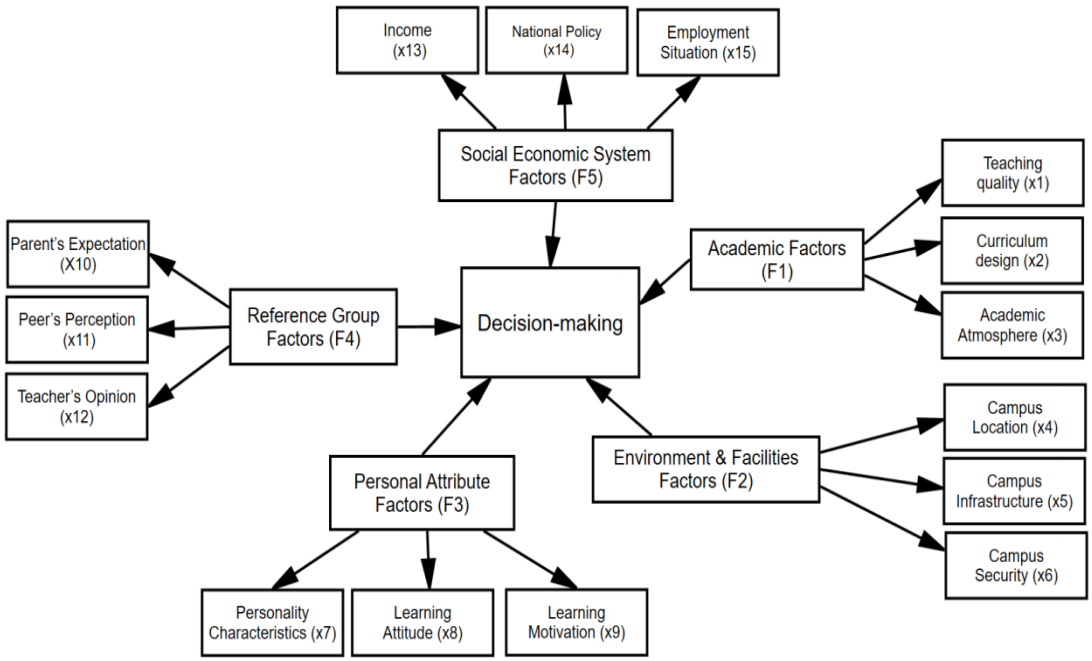

Figure 1 Conceptual framework of this research

Methodology

Research methodology refers to the systematic process and techniques employed to conduct research, gather information, analyze data, and draw conclusions. It provides a structured framework for researchers to plan, execute, and validate their studies, ensuring that the research objectives are met effectively. The methodology chosen depends on the nature of the research question, the type of data needed, and the overall goals of the study. This research adopted quantitative research. There are three processes involved in research: research design, data analysis, and results. Details were as follows:

Research Design

To achieve the aims of this study, the research design was structured into three distinct stages, as outlined below:

Stage One: To identify the factors that impact college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

In this initial phase, the researcher delved into a literature review focused on decision-making theory, with a specific emphasis on the determinants projected to impact students' choices concerning their further education. These determinants encompassed a wide range of factors,

including those of social, economic, political, and cultural nature, which were derived from both student perspectives and insights from academic institutions.

Stage Two: To formulate the model factors that play a role in college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

Building upon the findings from the first step, the researcher pinpointed the key factors influencing students' decision-making in relation to postgraduate entrance exams. The information extracted from the initial phase's outcomes contributed to the identification of these influential factors and guided the composition of a questionnaire designed for data collection purposes.

Stage Three: To develop a logistic regression equation for predicting college students' decision-making regarding postgraduate entrance examination in Xiangtan City.

In the final stage, the researcher employed a logistic regression equation to create a predictive model for understanding students' decision-making behaviors with regard to pursuing postgraduate entrance examinations in Xiangtan City. This statistical approach allowed the researcher to forecast students' choices based on the identified factors.

The research design's progression, characterized by these three distinct steps, was devised to comprehensively investigate the factors shaping college students' decision-making processes regarding postgraduate entrance examinations in Xiangtan City.

Population and sample

As indicated in the study, the total sample size comprised students from three universities. The initial calculation conducted using G*Power, with a desired power of 0.90 for the test, suggested a required sample of 509 participants. However, due to the utilization of an online data collection method, the researchers opted to include an additional 10% of questionnaires to ensure a sufficiently robust sample size.

Consequently, a total of 645 samples were collected and subsequently analyzed for the research study. This augmentation in the sample size was aimed at enhancing the reliability and statistical validity of the study's findings by accounting for potential data collection limitations and ensuring a more representative dataset.

The creation of research instruments

The researchers utilized a questionnaire comprising seven parts; Part I: Basic Information of Students. Part II: Decision-making of students, Part Three to Seven: Factors Affecting Questionnaire Survey. The quality of the questionnaire was evaluated by content validity and

reliability. For content validity, it was checked by 5 experts and analyzed using item-objective consistency (IOC). The value of the item value is ≥ 0.50. For reliability, it was analyzed by Cronbach's alpha at 0.80.

Data Collection

The researchers administered the Likert (5-point) scale questionnaire to the participants. Undergraduates from 3 universities in Xiangtan City were selected as the research sample, and data were collected through an online questionnaire.

Data analysis

Data analysis is a crucial step in the research process that involves transforming raw data into meaningful insights, patterns, and conclusions. It aims to extract relevant information from collected data to answer research questions, test hypotheses, and draw valid conclusions. The data analysis process varies depending on the type of data (quantitative or qualitative), the research objectives, and the chosen research methodology.

The overall population for this study consisted of 78,143 individuals. The sample size was determined utilizing G*Power and acquired through a stratified sampling technique, culminating in a total of 645 samples. Subsequent data collection transpired, with the collected data undergoing analysis via SPSS software.

To accomplish the goals of this research, diverse statistical methods were employed. For instance, descriptive statistics, mean values, and standard deviations were utilized to scrutinize each factor. The potential multi-collinearity among predictors was assessed through factor correlation. The correlation coefficient was deployed to ascertain the direction and magnitude of students' decision-making factors. Logistic regression analysis was employed to explore the comparative impact of predictor variables on students' admission decisions.

Results

Table 1 Data Checking Statistics

		Decision	F1	F2	F3	F4	F5
N	Valid	645	645	645	645	645	645
	Missing	0	0	0	0	0	0
Minimum		0	1.22	1.00	1.25	1.67	1.56
Maximum		1	5.00	5.00	5.00	5.00	5.00

From table 1, it was evident that the total sample size amounted to 645. The variables under consideration exhibited a range between a minimum value of 1.00 and a maximum value of 5.

Table 2 Data on Decision-making of Sample Group

Observed		Predicted		
		Decision		Percentage Correct
		0	1	
Step 0	Decision 0	0	156	.0
	1	0	489	100.0
	Overall Percentage			75.8

a. Constant is included in the model.

b. The cut value is .500

As indicated in table 2, a total of 156 students chose not to pursue the postgraduate entrance examination, making up 24.2% of the total. In contrast, the count of students opting to take the college entrance exam stood at 489, constituting 75.8% of the total.

Table 3 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.143	.092	154.380*	1	.000	3.135

*p<.001

As indicated in table 3, the statistical analysis revealed a consistent standard error of 0.092 across all variables. Furthermore, all variables demonstrated significance with p-values below 0.001. Notably, the Exp(B) value stood at 3.135, suggesting that the probability of choosing to enter was significantly higher than the probability of not entering.

Table 4 Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	68.971	5	.000
	Block	68.971	5	.000
	Model	68.971	5	.000

As indicated in table 4, the statistical results provided an evaluation of the model fit using various indicators. The Chi-square (CMIN) test statistic consistently yielded a value of 68.97, with degrees of freedom (df) equating to 5. Notably, all variables exhibited significance with a p-value of 0.000. This significance was observed across the steps, blocks, and the overall model, implying that all variables included in the model were appropriate and contributed significantly to the model's fit.

Table 5 Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	644.677[a]	.101	.152

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

As depicted in table 5, three key terms were presented: log likelihood, Cox & Snell R-square, and Nagelkerke R-square. The R-square values served as indicators of the goodness of fit, elucidating the degree to which our model aligns with the estimations and predictions formulated. Additionally, they offered insights into the extent to which the variance within the dependent variable was elucidated by the predictive variables. Within the table, the Nagelkerke R-square was determined to be 0.152, suggesting that approximately 15.20% of the variance within the dependent variable is accounted for by the independent variables included in the model.

Table 6 Hosmer and Lemeshow Test

Step	Chi-square	df	Sig
1	7.87	8	.45

As indicated in table 6, the outcomes reflect a coherence between the statistical results and the evaluation indicators employed for the model. The chi-square test statistic, employed to test the disparity between the hypothetical model and the empirical data, equates to 7.865, possessing 8 degrees of freedom, thereby yielding a p-value of 0.45.

Table 7 Correlation

		F1	F2	F3	F4	F5
F1	Pearson Correlation	1	.599**	.353**	.187**	.408**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	645	645	645	645	645
F2	Pearson Correlation	.599**	1	.288**	.294**	.434**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	645	645	645	645	645
F3	Pearson Correlation	.353**	.288**	1	.301**	.352**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	645	645	645	645	645

		F1	F2	F3	F4	F5
F4	Pearson Correlation	.187**	.294**	.301**	1	.446**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	645	645	645	645	645
F5	Pearson Correlation	.408**	.434**	.352**	.446**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	645	645	645	645	645

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7 revealed that all five factors exhibit correlation with students' decision-making. The presence of the asterisk symbol (*) signifies correlation between variables, while the absence of the symbol denotes no relationship between them. It can be seen from the table that the collinearity variable ranged from 0.288 to 0.599.

Table 8 Coefficients

variables	Tolerance	VIF
F1	.586	1.707
F2	.586	1.706
F3	.797	1.254
F4	.762	1.313
F5	.653	1.532

The data presented in table 8 indicates that the VIF values varied between 1.254 and 1.707, while the Tolerance values ranged from 0.586 to 0.797. These findings collectively indicate that all factors remained within acceptable limits and that there were no indications of multicollinearity effects.

Table 9 Logistic Regression Analysis

								95.0% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	F1(AF)	.571	.172	10.977**	1	.001	1.770	1.263	2.481
	F2(EFF)	-.533	.179	8.896**	1	.003	.587	.413	.833
	F3(PAF)	.714	.166	18.439***	1	.000	2.041	1.474	2.827
	F4(RGF)	-.110	.162	.461	1	.497	.896	.652	1.231

							95.0% C.I.for EXP(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
F5(SESF)	.677	.185	13.442***	1	.000	1.968	1.370	2.825
Constant	-3.880	.804	23.266***	1	.000	.021		

a. Variable(s) entered on step 1: F1, F2, F3, F4, F5.

**p<.01, ***p<.001

As evident from table 9, the Exp(B) values for the different factors were as follows: F1 had an Exp(B) of 1.770, F2 had an Exp(B) of 0.587, F3 had an Exp(B) of 2.041, F4 had an Exp(B) of 0.896, and F5 had an Exp(B) of 1.968. The respective regression coefficients (B) for F1 to F5 were 0.571, -0.533, 0.714, -0.110, and 0.677. All variables exhibited statistical significance (p<0.01), except for F4 which was not significant. This implies that all variables, except F4, have predictive capability in determining students' decision-making regarding entering graduate school.

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When Comparing the independent variable F1 (Academic factor), the analysis revealed a regression coefficient of 0.51, which was statistically significant (p=0.001). This coefficient indicates that for every one-unit increase in the Academic factor (F1), the odds ratio of a student's decision to enter graduate school increases by 0.51. Additionally, the odds ratio for F1 was computed as 1.770. This implies that higher scores on the Academic factor (F1) are associated with approximately 1.770 times higher odds of choosing to enter graduate school compared to not choosing to enter. Essentially, a greater Academic factor (F1) score is linked to an increased likelihood of students opting for postgraduate studies. The observed relationship between F1, odds ratio, and the decision to enter graduate school was statistically significant. These findings indicate that the Academic

factor (F1) significantly influences students' decisions to pursue further education and enroll in graduate school.

When comparing the independent variable F2 (Environment and Facility factor), the analysis revealed a regression coefficient of -0.553, which was statistically significant (p=0.003). This coefficient indicates that with each one-unit increase in the Environment and Facility factor (F2), the log-odds of a student deciding to enter graduate school decrease by 0.553. Additionally, the odds ratio for F2 was approximately calculated as 0.576. This suggests that higher scores on the Environment and Facility factor (F2) are associated with approximately 0.576 times the odds of choosing to enter graduate school compared to not choosing to enter. In simpler terms, a higher score on the Environment and Facility factor (F2) is connected to a reduced likelihood of students selecting postgraduate studies. This relationship between F2, odds ratio, and the decision to enter graduate school was statistically significant.

When comparing the independent variable F3 (Personal Attribute factor), the data analysis revealed a regression coefficient of 0.714, which was statistically significant (p=0.000). The calculated odds ratio for F3 was approximately 2.041. These findings suggest that when the score on the Personal Attribute factor (F3) is high, the log-odds of a student deciding to enter graduate school increase by a factor of 0.714. In other words, for every one-unit increase in the Personal Attribute factor (F3) score, the odds of a student choosing to enter graduate school increase by about 2.041 times. In simpler terms, a higher score on the Personal Attribute factor (F3) is associated with a higher likelihood of students opting for postgraduate studies. This observed relationship was statistically significant, underscoring the notable influence of the Personal Attribute factor on students' decisions to pursue further education.

When comparing the independent variable F4 (Reference Group factor), the data analysis revealed that the regression coefficient was -0.110, but it was not statistically significant (p>.05). These results indicate that the Reference Group factor (F4) did not have a significant impact on the likelihood of students deciding to enter graduate school. The regression coefficient being close to zero and the lack of statistical significance suggest that the Reference Group factor does not differentiate significantly between students who choose to pursue postgraduate studies and those who do not. In other words, the Reference Group factor (F4) does not seem to have a meaningful influence on the decision-making process regarding further education.

When comparing the independent variable F5 (Social Economic System factor), the data analysis indicated a regression coefficient of 0.677, which was statistically significant (p=0.001).

The calculated odds ratio for this coefficient was 1.968. This suggests that as the Social Economic System factor (F5) increases, the likelihood of a student deciding to enter graduate school becomes approximately 1.968 times higher compared to the likelihood of not making that decision. The positive sign of the regression coefficient and the statistically significant p-value signify that the Social Economic System factor significantly contributes to influencing students' decision-making regarding postgraduate studies.

In summary, the logistic regression equation can be succinctly described as follows:

Logistic (Y) = -3.88+0.57(F1)+0.71(F3)+0.68(F5)-0.53(F2)

When:

F1 refer to Academic factors (AF).

F2 refer to Environment and facilities factors (EFF).

F3 refer to Personal attribute factors (PAF).

F5 refer to Social economic system factors Reference group factors (RGF).

From this equation, we can predict the probability of a student's decision to enter graduate school using the logistic regression model. The formula for predicting this probability is as follows:

$$P\ (\text{Odds Ratio}) = \frac{e^{-3.88++0.57(F1)+0.71(F3)+0.68(F5)-0.53(F2)}}{1-e^{-3.88+.57(F1)+0.71(F3)+.068(F5)-0.53(F2)}}$$

P = .021

By plugging in the values of the respective factors (F1, F2, F3, and F5), we can calculate the predicted probability of a student's decision to enter graduate school. In specific case, the calculated probability (P) is approximately 0.021. This indicates that the odds of students deciding to pursue postgraduate studies are around 0.02 times higher compared to the odds of deciding not to pursue postgraduate studies, according to the logistic regression model.

Conclusion

(1) The investigation identified five distinct factors that significantly influenced students' decision-making. These factors encompassed academic factors, environmental and facility factors, personal attributes factors, reference group factors, and the social economic system factors. The influencing factors within these categories that affected students' decision-making in the context of three diverse universities were identified as teaching quality, curriculum design, academic

ambiance, campus location, campus infrastructure, campus security, learning attitude, learning motivation, parental expectations, peer perceptions, teacher viewpoints, income level, national policies, and employment prospects.

(2) Subsequent to modifying the measurement model, it was observed that the model achieved a favorable fit with the empirical data, and (3) the research further ascertained that academic factors, environmental and facility factors, personal attributes factors, and the social economic system factors exhibited positive impacts on students' decision-making processes.

Discussion

Research Objective 1: This section engages in an in-depth exploration of the findings and implications related to the first research objective, which aimed to determine the factors influencing college students' decision-making regarding postgraduate entrance examinations in Xiangtan City. The discussion unfolds by analyzing the identified factors, their significance, and the broader implications for students' educational pathways.

1) Factors Underlying Decision-Making:

The discussion commences by unpacking the five main factors that emerged as significant influences on college students' decision-making. These factors—academic, environment and facilities, personal attributes, reference group, and social economic system—formed the cornerstone of this investigation. Each factor's distinct components were meticulously identified through a combination of literature review, expert interviews, and empirical data analysis.

2) Significance of Academic Factor:

The academic factor surfaces as a critical determinant of students' decision-making. Teaching quality, curriculum design, and academic atmosphere emerged as pivotal components within this factor. The discussion delves into how students perceive the reputation and performance of institutions, and how these perceptions intertwine with career aspirations and personal goals. The implications of choosing programs aligned with future career paths are explored in-depth.

3) Personal Attributes and Decision-Making:

Personal attributes, encompassing variables like learning attitude and motivation, emerged as influential factors in students' decisions. The discussion examines how students' individual characteristics shape their educational choices. The interplay between self-perception,

aspirations, and decision-making is dissected, offering insights into how students navigate their academic journey.

4) Influence of Environment and Facilities:

Environment and facilities factor, including aspects like campus location and infrastructure, plays a pivotal role in students' decision-making. The discussion delves into how physical amenities impact students' perceptions of institutions and how they contribute to the overall educational experience. The significance of a conducive learning environment and its influence on program preferences are explored.

5) Role of Reference Groups:

The influence of reference groups, such as peers, parents, and teachers, is discussed in depth. Students' decisions are often shaped by the perceptions and expectations of these groups. The discourse probes into how social comparisons, peer opinions, and parental guidance impact students' choices. The interplay between external influences and personal aspirations is examined.

6) Impact of Social Economic System:

The social economic system factor, encompassing income, national policy, and employment prospects, is explored for its impact on decision-making. The discussion delves into how financial considerations, government incentives, and employment prospects influence students' choices. The implications of economic factors on students' educational trajectories are analyzed.

The implications of these findings for educational institutions are highlighted. Institutions can harness this knowledge to enhance teaching quality, campus infrastructure, guidance services, and career support mechanisms. Future studies could delve deeper into the interplay of these factors in different cultural contexts, or investigate the evolving nature of these influences over time. In conclusion, this section of the discussion serves as a comprehensive analysis of the factors influencing college students' decision-making to pursue postgraduate entrance examinations. By unraveling the intricate layers of academic, personal, environmental, societal, and economic influences, stakeholders gain valuable insights to inform strategies that empower students in their educational journeys.

Research Objective 2: To develop the model factors affecting college students on decision-making to postgraduate entrance examination in Xiangtan City). This section engages in a comprehensive analysis and interpretation of the findings related to the second research objective,

which aimed to develop a model that captures the factors influencing college students' decision-making to pursue postgraduate entrance examinations in Xiangtan City. The discussion delves into the process of model development, its validation, and the implications it holds for understanding and predicting students' decisions.

1) Model Development Process:

The discussion commences by outlining the process of model development, which involved three distinct steps. The first step encompassed the identification and study of variables pertaining to the five key factors affecting decision-making. A rigorous quantitative approach was employed to gather data from a diverse sample of students from multiple universities. In-depth literature review and expert interviews provided the foundational understanding for constructing the model.

2) Refinement and Validation:

The second step, as discussed, involved the iterative process of refining the model and assessing its validity. The discussion sheds light on how initial results were examined for the Index of Congruence (IOC) value, indicating the fit of the model to the empirical data. The significance of continuous optimization of the questionnaire and measurement model is explored, underscoring the need for model robustness.

3) Managerial Guidelines:

The final step of model development was the formulation of managerial guidelines. The discussion explicates how the variables extracted from the previous steps were synthesized into a comprehensive instrument—a questionnaire—to collect data from a substantial sample size. The population of students from three different universities in Xiangtan City formed the backdrop for data collection. Rigorous sampling methods were adopted to ensure representation and generalizability.

4) Implications of the Developed Model:

The discussion delves into the significance of the developed model in advancing our understanding of college students' decision-making processes. The model serves as a structured framework that integrates the myriad factors influencing decision-making into a cohesive narrative. By systematically capturing academic, personal, environmental, societal, and economic factors, the model provides a holistic view of students' choices.

5) Predictive Power and Application:

The discussion emphasizes the model's predictive power in deciphering students' decision-making patterns. The interplay between various factors can now be quantitatively evaluated, offering insights into the weightage of each factor in influencing decisions. Educational institutions, policymakers, and counselors can leverage this model to design targeted interventions that support students' decision-making processes.

6) Future Research Avenues:

The discussion concludes by delineating future research avenues that can be pursued in light of the developed model. While the current study provides a robust framework, the dynamic nature of decision-making necessitates ongoing exploration. Future research can delve deeper into the temporal aspects of decision-making, investigating how these factors evolve over time and interact with changing circumstances.

In conclusion, this section of the discussion underscores the pivotal role of the developed model in shedding light on the intricate factors shaping college students' decisions to pursue postgraduate entrance examinations. By capturing the essence of academic, personal, environmental, societal, and economic influences within a structured framework, the model empowers stakeholders to make informed decisions that align with students' aspirations and preferences. The model's potential for application and its capacity to drive targeted interventions mark a significant contribution to educational research and practice.

Research Objective 3: In this section, we delve into the intricate details of the third research objective, which aimed to construct a logistic regression equation capable of predicting college students' decision-making processes regarding postgraduate entrance examinations in Xiangtan City. This discussion highlights the process of equation construction, the significance of its components, and the potential implications for practical application.

1) Equation Construction Process:

The discussion commences by elucidating the steps involved in constructing the logistic regression equation. The variables representing the different factors identified in the previous research phases were meticulously incorporated into the equation. The coefficients corresponding to each factor were determined through rigorous statistical analysis, offering insights into the magnitude and direction of their impact on decision-making.

2) Interpretation of Coefficients:

The discussion delves into the interpretation of the coefficients in the constructed logistic regression equation. Each coefficient represents the extent to which a specific factor

influences the odds of college students' decision-making to pursue postgraduate entrance examinations. The direction of the coefficient (positive or negative) signifies whether the factor increases or decreases the likelihood of a particular decision.

3) Significance and Odds Ratios:

The discussion underscores the importance of the statistical significance of coefficients and their associated odds ratios. Coefficients with statistically significant p-values ($p < 0.05$) indicate a strong likelihood that the corresponding factor indeed affects decision-making. The odds ratio provides a tangible metric to comprehend the extent of the factor's influence, showcasing the change in odds associated with unit changes in the factor.

4) Model Interpretation and Application:

The discussion navigates the practical interpretation and application of the constructed logistic regression equation. Stakeholders in the educational realm, policymakers, and counselors can utilize this equation as a predictive tool. By plugging in specific factor values for individual students, the equation yields an estimated probability of their decision to pursue postgraduate entrance examinations. This predictive power assists in tailoring interventions and guidance according to students' unique profiles.

5) Limitations and Future Enhancements:

The discussion acknowledges the limitations of the constructed logistic regression equation. While the model offers a quantitative prediction, it cannot encompass all nuanced aspects of decision-making. The dynamic nature of decision processes, individual idiosyncrasies, and external influences may introduce variability. Future research can delve into enhancing the equation's accuracy by incorporating additional factors or considering time-sensitive variables.

In conclusion, this section highlights the accomplishment of the third research objective by constructing a logistic regression equation that holds promise in predicting college students' decisions regarding postgraduate entrance examinations. The equation encapsulates the intricate interplay of factors that influence decision-making, offering a tangible tool for informed intervention and support. This equation bridges the gap between theoretical understanding and practical application, marking a significant stride in enhancing decision-making processes for students in Xiangtan City.

Recommendation

The postgraduate entrance examination has become a hot phenomenon in current education. The survey results of this study reflect that the postgraduate entrance examination is no longer simply an educational issue, but a social issue influenced by economic, cultural and political system and other factors.

The results show that the main factors affecting the entrance examination of graduate students are academic factors, campus facilities and environment factors, personal attributes, reference group factors and social economic system factors.That is, many college students tend to take social and economic system factors as the main reference points when facing work difficulties. And factors such as academic factors, campus facilities and personal attributes also play an important role and influence in college students' decision-making, which have a great impact on the behavior of many students. In the process of research, we also found a lot of problems, in view of some unavoidable problems, this dissertation tries to put forward some specific opinions or suggestions from the three perspectives of universities, society and students themselves.

First of all, from the perspective of colleges and universities, we should actively reform the undergraduate education training model and guide students to find their own career planning. Colleges and universities should further strengthen the guidance of college students' career planning. For practical disciplines, we should actively support their internships and training, so that they can get in touch with society, understand society, integrate into society as soon as possible, and help them make educational investment choices that suit their own needs and needs. Colleges and universities should pay special attention to the phenomenon of college students' aversion to employment, and deepen the reform of higher education quality evaluation mechanism according to the concrete reality.

Second, for society, the correlation between wages and education should be weakened. The research shows that the conformity effect has a certain degree of influence on the decision-making behavior of some examinees. In other words, people's decision-making behavior is not only affected by their own conditions, but also inevitably affected by the surrounding information, such as the tendency of policy or the bias of social public opinion. If the country and society can widely carry forward the correct concept of talent, standardize and rationalize the social evaluation standards, improve the labor market mechanism and evaluation system, so that people can give full play to their talents. Therefore, although we cannot change the herd effect, we can use this

herd effect to guide college students to focus on thinking about the path suitable for their own development, rather than blindly pursuing higher education.

Finally, for students or parents who are in the confused period, they should determine reasonable educational goals and motivations, learn to position themselves as soon as possible, recognize their actual needs, have their own judgment and awareness, and remember not to blindly follow the trend or choose the way of postgraduate entrance examination just because of delaying employment; For college students who choose to take the postgraduate entrance exam without academic intention, they should consciously cultivate their independence, understand their own character and expertise, and fully clarify their career planning both in life and psychologically.

Recommendation for further research

By While this study has provided valuable insights into the factors influencing college students' decision-making regarding postgraduate entrance examinations in Xiangtan City, there are several avenues for further research that could contribute to a deeper understanding of this complex phenomenon. The following recommendations are proposed for future research endeavors:

1) Longitudinal Studies:

Conduct longitudinal studies that track students' decision-making processes over an extended period. This would offer insights into how factors evolve and interact over time, providing a more comprehensive understanding of the dynamic nature of decision-making.

2) Qualitative Exploration:

Utilize qualitative research methods, such as in-depth interviews and focus groups, to delve deeper into students' experiences, motivations, and decision-making strategies. Qualitative approaches can uncover nuanced insights that quantitative methods may overlook.

3) Comparative Studies:

Undertake comparative studies across different cities or regions to explore whether the factors influencing students' decision-making vary based on cultural, socioeconomic, or geographical contexts. Such studies can shed light on the role of context in shaping decisions.

4) Exploration of Cultural Factors:

Investigate the influence of cultural factors, societal norms, and family expectations on students' decision-making processes. Cultural dimensions and values may play a significant role in shaping choices and preferences.

5) Impact of Technology:

Examine how technological advancements and the proliferation of online resources impact students' decision-making. Investigate how digital platforms influence information-seeking behaviors and decision-making strategies.

6) Influence of Peer Networks:

Investigate the influence of peer networks and social interactions on decision-making. Analyze how students' peers, friends, and social circles shape their perceptions, choices, and aspirations.

7) Inclusion of Psychological Factors:

Explore the role of psychological factors, such as self-efficacy, self-confidence, and risk perception, in students' decision-making processes. Understand how psychological attributes interact with other factors.

8) In-depth Analysis of Reference Groups:

Further explore the impact of reference groups on decision-making. Investigate how different reference groups, such as family, friends, teachers, and mentors, contribute to shaping students' choices.

9) Cross-Disciplinary Studies:

Collaborate with experts from psychology, sociology, and economics to conduct cross-disciplinary studies that provide a holistic understanding of decision-making. Incorporate insights from multiple disciplines to enrich the analysis.

10) Gender and Diversity Considerations:

Investigate how gender and diversity considerations intersect with decision-making processes. Examine how students from different gender identities and backgrounds approach postgraduate education decisions.

11) Impact of Online Information:

Study the impact of online information and reviews on students' decision-making. Analyze how online platforms, ratings, and reviews influence students' perceptions of institutions and programs.

12) International Comparative Studies:

Conduct comparative studies with international universities and student populations to explore similarities and differences in decision-making factors across different countries and educational systems.

Incorporating these recommendations into future research endeavors can contribute to a deeper and more nuanced understanding of the intricate factors that influence college students' decision-making processes regarding postgraduate entrance examinations. This expanded knowledge can inform policy, practice, and support mechanisms that enhance students' decision-making experiences.

In conclusion, this dissertation extensively investigates the factors influencing college students' decisions on taking postgraduate entrance exams in Xiangtan City. By combining theoretical perspectives with empirical analysis, it reveals the multifaceted complexity of this crucial decision that impacts both academia and daily life. The significance of this study is substantial, and it is hoped to provide valuable insights for the academic field, policy formulation, and practical guidance in student education endeavors.

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