Determinants of Private Higher Education Institution Choice: The Roles of Reference Groups, Tuition Fees, Location, and Word-of-Mouth among Chinese Ethnic Students in Medan, Indonesia

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ABSTRACT:

The increasing competition among private higher education institutions (PHEIs) in Indonesia has intensified the need to understand the factors influencing students' university selection decisions. This study investigates the effects of Reference Groups, Tuition Fees, and Location on University Choice Decisions, with Word-of-Mouth (WOM) communication serving as a mediating variable among Chinese ethnic students in Medan, Indonesia. The study adopts a quantitative explanatory research design and employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze data collected from 347 Chinese ethnic undergraduate students enrolled in five private universities in Medan. The findings reveal that Reference Groups exert the strongest positive influence on both WOM and University Choice Decisions. Tuition Fees positively affect WOM and University Choice Decisions, although with relatively smaller effect sizes. Conversely, Location demonstrates a significant negative relationship with both WOM and University Choice Decisions. WOM significantly influences University Choice Decisions and serves as a significant mediator in the relationships between Reference Groups, Tuition Fees, Location, and University Choice Decisions. The structural model exhibits substantial explanatory power, explaining 68.6% of the variance in University Choice Decisions and 88.9% of the variance in WOM. These findings highlight the dominant role of social influence and interpersonal communication in shaping educational choices among Chinese ethnic students. The study contributes to the higher education marketing literature by integrating Reference Group Theory, Human Capital Theory, and Word-of-Mouth Communication Theory within a culturally specific context. The findings also provide practical implications for university managers seeking to strengthen student recruitment strategies through family engagement, alumni networks, and positive WOM generation.

Keywords: Private Higher Education Institutions, University Choice Decision, Reference Groups, Tuition Fees, Location, Word-of-Mouth, Chinese Ethnic Students, Indonesia.

1. Introduction

The higher education sector has undergone substantial transformation over the past two decades, driven by globalization, demographic changes, technological advancement, and increasing competition among institutions. In many developing countries, private higher education institutions (PHEIs) have emerged as significant contributors to educational access and human capital development, complementing the role of public universities in meeting growing demand for tertiary education (Altbach et al., 2019). Indonesia represents one of the largest higher education markets in Southeast Asia, with hundreds of private universities competing to attract students from diverse socioeconomic and cultural backgrounds. As competition intensifies, understanding the determinants of students' institutional choice has become increasingly important for university administrators, policymakers, and marketing practitioners seeking to improve recruitment effectiveness and institutional sustainability.

The decision to select a higher education institution is widely recognized as a complex consumer decision-making process involving multiple economic, social, psychological, and environmental considerations (Chapman, 1981; Hossler & Gallagher, 1987). Unlike ordinary consumption decisions, choosing a university entails substantial financial investment, long-term career implications, and social prestige considerations. Consequently, prospective students typically evaluate a range of institutional attributes before making enrollment decisions. Previous studies have identified numerous factors influencing university choice, including academic reputation, tuition fees, location, educational facilities, employability prospects, parental influence, peer recommendations, and promotional activities (Maringe, 2006; Ivy, 2010; Kusumawati, 2013). However, the relative importance of these factors often varies across cultural groups and geographical contexts, suggesting the need for context-specific investigations.

Within the Indonesian context, the expansion of private higher education has significantly altered the competitive landscape. According to data from the Indonesian higher education system, private institutions account for the majority of higher education providers and enroll a substantial proportion of students nationwide. This competitive environment has compelled institutions to adopt market-oriented strategies to attract prospective students. Consequently, understanding the factors that shape student preferences has become critical for developing effective recruitment and retention strategies. While previous Indonesian studies have examined university choice determinants, much of the existing literature focuses on general student populations and pays limited attention to the influence of ethnicity and cultural characteristics on educational decision-making (Kusumawati, 2013; Hidayat et al., 2021).

One particularly important yet underexplored population is the Chinese ethnic community in Indonesia. The Chinese ethnic group has historically played a significant role in Indonesia's economic development and possesses distinctive cultural values regarding education, family influence, and social networks (Suryadinata, 2017). Education is often regarded as a strategic investment for socioeconomic mobility, professional achievement, and family prestige within Chinese communities. As a result, educational decisions are frequently influenced not only by individual preferences but also by family expectations, community norms, and interpersonal recommendations. These characteristics suggest that factors such as reference groups and word-of-mouth communication may exert stronger effects on university selection among Chinese ethnic students compared to other populations.

Reference group theory provides a useful framework for understanding how social influences shape consumer behavior and decision-making processes. A reference group consists of individuals or groups whose opinions, attitudes, and behaviors serve as standards or points of comparison for others (Bearden & Etzel, 1982). In the context of higher education, reference groups may include parents, siblings, relatives, friends, teachers, alumni, and community leaders. Prior research demonstrates that reference groups significantly influence students' perceptions of institutional

quality, educational value, and enrollment intentions (Maringe, 2006; Joseph et al., 2012). In collectivist cultures such as Indonesia, social approval and family expectations frequently play a substantial role in educational decisions, making reference group influence particularly relevant (Hofstede, 2001). Despite this theoretical importance, empirical evidence regarding the impact of reference groups among Chinese ethnic students in Indonesia remains limited.

In addition to social influences, economic considerations continue to represent a critical determinant of higher education choice. Tuition fees constitute one of the most visible and consequential costs associated with university attendance. Human capital theory suggests that students and their families evaluate educational investments by comparing anticipated benefits with associated costs (Becker, 1993). Although higher tuition fees may sometimes signal superior quality and institutional prestige, excessive costs can discourage enrollment, particularly among middle-income households. Previous studies have reported mixed findings regarding the relationship between tuition fees and institutional choice, indicating that perceptions of affordability and value for money often moderate students' responses to pricing strategies (Ivy, 2010; Ming, 2010). Given the entrepreneurial orientation and investment-conscious nature frequently associated with Chinese communities, tuition fees may represent a particularly salient consideration during university selection.

Location is another important institutional attribute influencing prospective students' decisions. Geographic proximity affects transportation costs, accessibility, convenience, safety, and opportunities for maintaining family connections. The importance of location has been consistently documented in higher education marketing literature, particularly in urban environments where students have multiple educational alternatives within a relatively small geographic area (Chapman, 1981; Kusumawati, 2013). In a metropolitan city such as Medan, where numerous private universities operate in close proximity, location may significantly influence students' perceptions of convenience and institutional attractiveness. Furthermore, location may indirectly shape students' experiences through its association with campus accessibility, surrounding infrastructure, and perceived environmental quality.

Beyond direct social and institutional influences, word-of-mouth (WOM) communication has emerged as one of the most influential sources of information in educational markets. WOM refers to informal interpersonal communication regarding products, services, or organizations between consumers and potential consumers (Kotler et al., 2022). Unlike formal promotional messages, WOM is generally perceived as more credible, trustworthy, and less biased because it originates from individuals with firsthand experience. In higher education contexts, prospective students frequently rely on recommendations from current students, alumni, family members, and friends when evaluating institutions. The growing prevalence of digital communication platforms has further amplified the reach and influence of WOM, enabling information about universities to spread rapidly through both offline and online networks (Cheung & Thadani, 2012).

The relationship between reference groups and WOM is particularly noteworthy. Individuals often transmit information and recommendations through social networks, meaning that the influence of reference groups may operate indirectly through WOM mechanisms. Similarly, perceptions regarding tuition fees and institutional location may shape students' willingness to share positive or negative experiences with others, thereby influencing future enrollment decisions. Consequently, WOM may function not only as an independent determinant but also as a mediating mechanism linking institutional attributes and social influences to university choice decisions. Despite increasing recognition of WOM's importance, limited research has simultaneously examined its mediating role between reference groups, tuition fees, location, and institutional choice within the Indonesian higher education context.

This study seeks to address these gaps by investigating the determinants of private higher education institution choice among Chinese ethnic

students in Medan, Indonesia. Specifically, the study examines the direct effects of reference groups, tuition fees, and location on students' decisions to choose private higher education institutions, while also exploring the mediating role of WOM communication. By focusing on a culturally distinctive student population, this research contributes to a more nuanced understanding of higher education consumer behavior in multicultural societies. Furthermore, the study extends existing literature by integrating social influence theory, consumer behavior perspectives, and educational marketing frameworks into a comprehensive model of institutional choice.

The findings are expected to provide several important contributions. Theoretically, the study enriches the literature on higher education marketing by examining the interplay between social influence factors, economic considerations, and communication mechanisms within a specific cultural context. Empirically, it offers evidence regarding the determinants of university choice among Chinese ethnic students, a population that remains underrepresented in higher education research. Practically, the results may assist university administrators and policymakers in designing more effective recruitment strategies, improving institutional positioning, and enhancing student engagement initiatives. Ultimately, understanding how reference groups, tuition fees, location, and WOM shape enrollment decisions can help private higher education institutions develop sustainable competitive advantages in an increasingly competitive educational marketplace.

2. Theoretical Framework

Consumer Decision-Making Theory in Higher Education Choice

The selection of a higher education institution represents a complex consumer decision-making process involving the evaluation of multiple alternatives based on economic, social, psychological, and environmental considerations. Unlike routine purchasing decisions, university choice is characterized by high involvement, substantial financial commitment, long-term consequences, and considerable uncertainty regarding future outcomes (Chapman, 1981; Hossler & Gallagher, 1987). Consequently, prospective students and their families engage in extensive information search and evaluation processes before making enrollment decisions.

Consumer decision-making theory suggests that individuals systematically assess available information, compare alternatives, and select options that maximize perceived value and expected benefits (Schiffman & Wisenblit, 2019). In the context of higher education, institutional choice is influenced not only by tangible attributes such as tuition fees and location but also by intangible factors including reputation, social influence, and interpersonal communication. Therefore, understanding university selection requires an integration of economic and sociological perspectives that explain how students evaluate educational opportunities.

The present study adopts consumer decision-making theory as an overarching framework to explain how Chinese ethnic students in Medan evaluate private higher education institutions. Specifically, the model proposes that reference groups, tuition fees, and location influence students' enrollment decisions both directly and indirectly through word-of-mouth (WOM) communication. This framework recognizes that educational choices are embedded within social networks and cultural contexts, making interpersonal influences particularly important.

Reference Group Theory

Reference Group Theory provides one of the most influential explanations of how social interactions shape individual attitudes, preferences, and behaviors. A reference group refers to any individual or group that serves as a point of comparison, source of norms, or provider of information for decision-making processes (Bearden & Etzel, 1982). Such groups may include family members, friends, peers, teachers, colleagues, and community leaders.

According to social influence theory, reference groups exert influence through three primary mechanisms: informational influence, utilitarian influence, and value-expressive influence (Deutsch

& Gerard, 1955). Informational influence occurs when individuals seek guidance from knowledgeable others to reduce uncertainty. Utilitarian influence arises from the desire to obtain rewards or avoid social sanctions, while value-expressive influence reflects the need to maintain consistency with group values and identities.

In higher education decisions, reference groups often play a critical role because prospective students face considerable uncertainty regarding educational quality, future career opportunities, and institutional reputation (Maringe, 2006). Parents frequently provide financial support and therefore influence educational decisions. Friends and peers contribute experiential information regarding campus life and academic quality, while teachers and alumni may offer professional recommendations.

The influence of reference groups is particularly significant in collectivist societies where family expectations and social harmony are highly valued (Hofstede, 2001). Chinese communities traditionally emphasize educational achievement as a means of social mobility, family honor, and economic advancement (Suryadinata, 2017). Consequently, Chinese ethnic students may rely heavily on family members and trusted social networks when selecting higher education institutions. Based on this theoretical perspective, reference groups are expected to positively influence both WOM communication and university choice decisions.

Human Capital Theory and Tuition Fees

The relationship between tuition fees and educational choice can be explained through Human Capital Theory. Originally developed by Becker (1993), Human Capital Theory posits that education is an investment that enhances individuals' productivity, skills, and future earning potential. Students and their families therefore evaluate educational opportunities by comparing expected benefits with associated costs.

Tuition fees represent one of the most visible costs associated with higher education. From an economic perspective, prospective students assess whether the perceived benefits of attending a particular institution justify the financial investment required. Educational institutions offering superior academic quality, employability prospects, and institutional prestige may command higher tuition fees because students perceive greater returns on investment (Marginson, 2016).

However, the relationship between tuition fees and enrollment decisions is not always straightforward. While high tuition fees may signal quality and exclusivity, excessive costs can reduce affordability and discourage enrollment (Ivy, 2010). Previous studies suggest that students often evaluate tuition fees in relation to perceived value rather than absolute cost levels (Kotler et al., 2022). Consequently, students are more likely to select institutions that offer a favorable balance between educational quality and financial expenditure.

Within Chinese ethnic communities, educational investment is frequently viewed as a strategic pathway to long-term socioeconomic success. Parents may be willing to incur substantial educational expenses if they believe such investments will generate future benefits for their children. Nevertheless, perceptions regarding affordability and value remain important determinants of institutional choice. Therefore, tuition fees are expected to influence both students' university selection decisions and the WOM communication they share with others regarding institutional value.

Spatial Choice Theory and Institutional Location

The importance of location in educational decision-making can be explained through Spatial Choice Theory, which suggests that individuals prefer alternatives that minimize travel costs, maximize accessibility, and provide convenience (McFadden, 1978). Location influences not only transportation expenses but also perceptions of safety, accessibility, social environment, and quality of life.

In higher education contexts, location remains one of the most influential institutional attributes affecting student preferences (Chapman, 1981). Universities situated in accessible areas often benefit from lower commuting costs, stronger transportation infrastructure, and greater proximity to residential neighborhoods. These factors reduce

the practical burdens associated with educational participation and may increase institutional attractiveness.

Furthermore, urban location can affect access to employment opportunities, internships, business networks, and social amenities that contribute to students' educational experiences. In cities such as Medan, where numerous private universities compete within a relatively concentrated geographic area, location serves as an important differentiating factor.

Location may also affect students' perceptions and experiences, which subsequently influence WOM communication. Positive experiences related to accessibility, campus environment, and surrounding facilities are likely to generate favorable recommendations. Therefore, location is theorized to exert both direct and indirect effects on university choice through WOM communication.

Word-of-Mouth Communication Theory

Word-of-mouth communication constitutes one of the most powerful forms of informal information exchange in consumer markets. WOM refers to interpersonal communication concerning products, services, or organizations between individuals who are perceived as independent of commercial influence (Arndt, 1967). Because WOM originates from personal experiences and trusted relationships, it is generally considered more credible than formal advertising or promotional messages.

The Information Adoption Model developed by Sussman and Siegal (2003) suggests that individuals are more likely to adopt information perceived as credible, useful, and trustworthy. In higher education contexts, prospective students often rely on recommendations from family members, friends, alumni, and current students to evaluate institutional quality. Such recommendations help reduce uncertainty and facilitate decision-making.

The rapid growth of digital communication platforms has expanded the scope of WOM beyond traditional face-to-face interactions. Electronic word-of-mouth (eWOM) enables students to access reviews, testimonials, and experiences shared through social media and online communities (Cheung & Thadani, 2012). Nevertheless, interpersonal recommendations from trusted social networks continue to play a dominant role in educational decision-making.

WOM is particularly relevant among Chinese ethnic communities because social relationships and trust-based networks often influence major life decisions. Positive WOM may strengthen perceptions of institutional quality, whereas negative WOM may discourage enrollment intentions. Therefore, WOM is expected to directly influence university choice decisions.

The Mediating Role of Word-of-Mouth Communication

The present study further proposes that WOM functions as a mediating mechanism linking reference groups, tuition fees, and location with university choice decisions. This proposition is grounded in Social Communication Theory, which emphasizes that information and influence are transmitted through interpersonal networks (Rogers, 2003).

Reference groups frequently disseminate opinions, experiences, and recommendations through WOM channels. Likewise, perceptions regarding tuition affordability and campus accessibility may influence students' willingness to share positive or negative evaluations with others. Consequently, institutional attributes and social influences often affect decision-making indirectly by shaping WOM communication.

The mediating role of WOM reflects the reality that prospective students rarely make educational decisions solely based on objective information. Instead, they interpret institutional characteristics through conversations and recommendations obtained from trusted individuals. Thus, WOM serves as a critical mechanism through which social influence and institutional attributes shape enrollment decisions.

Based on the theoretical foundations discussed above, the proposed conceptual model suggests that reference groups, tuition fees, and location positively influence private higher education

institution choice, both directly and indirectly through WOM communication. This integrated framework provides a comprehensive explanation of how social, economic, and environmental factors interact to influence university selection among Chinese ethnic students in Medan, Indonesia.

3. Research Method

Research Design

This study employed a quantitative explanatory research design to examine the determinants of private higher education institution (PHEI) choice among Chinese ethnic students in Medan, Indonesia. The explanatory approach was selected because the study aims to investigate causal relationships among Reference Groups, Tuition Fees, Location, Word-of-Mouth (WOM), and University Choice Decisions. A cross-sectional survey design was adopted, whereby data were collected at a single point in time using structured questionnaires.

The study utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) to simultaneously assess the measurement model and structural relationships among latent constructs. PLS-SEM is particularly suitable for predictive research involving complex models and mediation effects (Hair et al., 2022).

Population and Sampling Procedure

The population consisted of Chinese ethnic undergraduate students enrolled in the 2023/2024 academic cohort at five private higher education institutions in Medan. First-year students were selected because they had recently experienced the university selection process and could accurately recall the factors influencing their enrollment decisions.

Table 1. Population and Sample Distribution

Institution	Chinese Ethnic	Proportion (%)	Sample
Universitas Prima Indonesia	1,100	41.5	144
Universitas Mikroskil	600	22.6	79
Universitas IBBI	200	7.5	26
Universitas Terra Bhinneka	500	18.9	66
STIE Eka Prasetya	250	9.4	32
Total	**2,650**	**100.0**	**347**

The minimum sample size was determined using Slovin's formula with a 5% margin of error, resulting in a minimum sample requirement of 347 respondents. The adequacy of the sample size was further verified using Cochran's sample size formula. Respondents were selected using purposive sampling based on the following criteria:

1. Chinese ethnic background.
2. Enrolled in a private higher education institution in Medan.
3. Registered as a member of the 2023/2024 undergraduate cohort.

Data Collection

Primary data were collected through a structured questionnaire distributed directly to respondents. The questionnaire consisted of two sections. The first section captured respondents' demographic profiles, while the second measured perceptions related to the study constructs.

A seven-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) was employed.

Table 2. Likert Scale Measurement

Scale	Description
1	Strongly Disagree
2	Disagree
3	Slightly Disagree
4	Neutral
5	Slightly Agree
6	Agree
7	Strongly Agree

Questionnaire items were adapted from validated instruments used in previous studies and subsequently contextualized to the higher education sector in Indonesia.

Variables and Measurement

The study included three exogenous variables, one mediating variable, and one endogenous variable.

Table 3. Operational Definition of Variables

Variable	Definition	Dimensions	Source
Reference Groups (RG)	Individuals or groups that influence attitudes, values, and behavioral decisions	Involvement, Interaction Frequency, Group Influence, Identification, Membership, Social Status	Schiffman & Kanuk (2007)
Tuition Fees (TF)	Students' perceptions regarding educational costs and value received	Value Indicator, Quality Signal, Affordability, Pricing Flexibility, Competitive Pricing	Tjiptono (2008)
Location (LOC)	Accessibility and physical positioning of the institution	Accessibility, Visibility, Parking Facilities, Expansion Potential, Environment	Kasmir (2009)
Word-of-Mouth (WOM)	Informal interpersonal communication regarding institutional information and experiences	Talkers, Topics, Tools, Participation, Tracking	Kotler & Armstrong (2014)
University Choice Decision (UCD)	Students' decision to select a private higher education institution	Product Choice, Brand Choice, Distributor Choice, Timing, Payment Method	Firmansyah (2018)

Data Analysis Technique

The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS software. The analysis followed the two-stage approach recommended by Hair et al. (2022), consisting of:

1. Measurement Model Assessment (Outer Model)
2. Structural Model Assessment (Inner Model)

Table 4. Measurement Model Evaluation Criteria

Criterion	Threshold Value	Reference
Factor Loading	≥ 0.70 (acceptable ≥ 0.50)	Hair et al. (2022)
Average Variance Extracted (AVE)	≥ 0.50	Hair et al. (2022)
Composite Reliability (CR)	≥ 0.70	Hair et al. (2022)
Cronbach's Alpha	≥ 0.70	Hair et al. (2022)
HTMT Ratio	< 0.90	Henseler et al. (2015)

Table 5. Structural Model Evaluation Criteria

Criterion	Threshold
Path Coefficient (β)	Positive and Significant
R^2	0.19 = Weak; 0.33 = Moderate; 0.67 = Substantial
Effect Size (f^2)	0.02 = Small; 0.15 = Medium; 0.35 = Large
Predictive Relevance (Q^2)	> 0
SRMR	< 0.08
NFI	> 0.90

Research Model

The proposed structural model specifies both direct and indirect relationships among the constructs. WOM functions as a mediating variable linking Reference Groups, Tuition Fees, and Location to University Choice Decisions.

The structural equations are expressed as follows:

$$WOM = \beta_1 RG + \beta_2 TF + \beta_3 LOC + \varepsilon_1$$

$$UCD = \beta_4 RG + \beta_5 TF + \beta_6 LOC + \beta_7 WOM + \varepsilon_2$$

where:

RG = Reference Groups

TF = Tuition Fees

LOC = Location

WOM = Word-of-Mouth

UCD = University Choice Decision

ε = Error Term

4. Results

Measurement Model Assessment

The measurement model was evaluated through assessments of indicator reliability, internal consistency reliability, convergent validity, and discriminant validity following the guidelines proposed by Hair et al. (2022).

Indicator Reliability

Indicator reliability was assessed using outer loading values. As presented in Table 6, all indicators exhibited standardized loadings exceeding the recommended threshold of 0.70, ranging from 0.747 to 0.901. These results indicate that each indicator explained more than 50% of the variance of its respective latent construct and therefore demonstrated satisfactory convergent validity.

Table 6. Summary of Outer Loading Results

Construct	Loading Range
Reference Groups	0.776 – 0.896
Tuition Fees	0.802 – 0.889
Location	0.792 – 0.879

Word-of-Mouth	0.790 – 0.901
University Choice Decision	0.747 – 0.874

Among the indicators of Reference Groups, KR10 and KR8 exhibited the highest loadings, indicating their strong contribution to the construct. Similarly, WOM10, WOM11, and WOM12 demonstrated particularly strong loadings exceeding 0.89, suggesting that these indicators were highly representative of the WOM construct.

Internal Consistency Reliability and Convergent Validity

The reliability and convergent validity results are presented in Table 7.

Table 7. Reliability and Convergent Validity Assessment

Construct	**Cronbach's Alpha**	**rho_A**	**Composite Reliability**	**AVE**
Reference Groups	0.951	0.952	0.958	0.693
Tuition Fees	0.933	0.936	0.946	0.715
Location	0.940	0.942	0.950	0.705
Word-of-Mouth	0.966	0.967	0.970	0.728
University Choice Decision	0.954	0.960	0.960	0.665

All constructs exceeded the recommended threshold of 0.70 for Cronbach's Alpha and Composite Reliability, indicating excellent internal consistency reliability. Furthermore, all Average Variance Extracted (AVE) values were greater than 0.50, ranging from 0.665 to 0.728, confirming adequate convergent validity. These findings suggest that the indicators consistently measured their intended latent constructs.

Discriminant Validity

Discriminant validity was assessed using the Fornell–Larcker criterion. The square root of AVE values ranged from 0.815 to 0.853 across constructs.

Table 8. Fornell–Larcker Criterion

Construct	**√AVE**
Reference Groups	0.832
Tuition Fees	0.846
Location	0.839
Word-of-Mouth	0.853
University Choice Decision	0.815

Although all constructs demonstrated strong convergent validity, several inter-construct correlations exceeded the corresponding square root of AVE values, particularly among Reference Groups, Tuition Fees, Location, and WOM. These findings indicate potential concerns regarding discriminant validity and suggest a high degree of conceptual overlap among these constructs. Nevertheless, considering the strong theoretical interrelationships among social influence, pricing perceptions, location attributes, and communication behavior in higher education choice decisions, the constructs were retained for subsequent structural model analysis. This issue is acknowledged as a limitation of the study and should be addressed in future research through higher-order construct modeling or indicator refinement.

Structural Model Assessment

Hypothesis Testing

The structural model was evaluated using the bootstrapping procedure. The path coefficients, t-statistics, and p-values are reported in Table 9.

Table 9. Direct and Indirect Effects

Relationship	β	t-value	p-value	Decision
Reference Groups → University Choice Decision	2.739	11.807	<0.001	Supported
Tuition Fees → University Choice Decision	0.675	2.075	0.039	Supported
Location → University Choice Decision	-3.166	7.942	<0.001	Supported
Reference Groups → WOM	1.496	11.682	<0.001	Supported
Tuition Fees → WOM	0.494	2.670	0.008	Supported
Location → WOM	-1.056	4.865	<0.001	Supported
WOM → University Choice Decision	0.451	5.579	<0.001	Supported
Reference Groups → WOM → University Choice Decision	0.675	4.771	<0.001	Supported
Tuition Fees → WOM → University Choice Decision	0.223	2.288	0.023	Supported
Location → WOM → University Choice Decision	-0.477	3.387	0.001	Supported

The results indicate that Reference Groups exerted the strongest positive direct effect on University Choice Decision ($\beta = 2.739$, $p < 0.001$). Tuition Fees also positively influenced University Choice Decision ($\beta = 0.675$, $p = 0.039$). In contrast, Location demonstrated a significant negative relationship with University Choice Decision ($\beta = -3.166$, $p < 0.001$).

Reference Groups and Tuition Fees positively influenced WOM, whereas Location exhibited a significant negative effect on WOM. Furthermore, WOM significantly influenced University Choice Decision ($\beta = 0.451$, $p < 0.001$), indicating that favorable interpersonal communication enhances students' likelihood of selecting a private university.

Regarding mediation effects, WOM significantly mediated the relationships between Reference Groups, Tuition Fees, and University Choice Decision. WOM also significantly mediated the relationship between Location and University Choice Decision, although the direction of the mediation effect remained negative. These findings support the mediating role of WOM in students' higher education selection processes.

Coefficient of Determination (R^2)

The predictive accuracy of the model was assessed through the coefficient of determination (R^2).

Table 10. Coefficient of Determination

Endogenous Variable	R^2	Adjusted R^2
University Choice Decision	0.686	0.683
Word-of-Mouth	0.889	0.888

The model explained 68.6% of the variance in University Choice Decision and 88.9% of the variance in WOM. According to Chin's (1998) criteria, both values indicate substantial explanatory power. The minimal differences between R^2 and Adjusted R^2 further suggest model stability and the absence of substantial overfitting.

Effect Size (f^2)

Effect size analysis was conducted to determine the relative contribution of each exogenous variable to the endogenous constructs.

Table 11. Effect Size Assessment

Relationship	f^2	Interpretation
Reference Groups → WOM	0.438	Large
Reference Groups → University Choice Decision	0.362	Large
Tuition Fees → WOM	0.021	Small
Tuition Fees → University Choice Decision	0.014	Small
Location → WOM	0.073	Small
Location → University Choice Decision	0.216	Medium
WOM → University Choice Decision	0.072	Small

Reference Groups emerged as the most influential predictor in the model, exhibiting large effect sizes on both WOM and University Choice Decision. In contrast, Tuition Fees demonstrated relatively small effects despite being statistically significant. Location exerted a moderate effect on University Choice Decision but only a small effect on WOM.

Predictive Relevance (Q^2)

Predictive relevance was assessed using the Stone–Geisser Q^2 statistic.

Table 12. Predictive Relevance Assessment

Construct	RMSE	MAE	Q^2predict
University Choice Decision	0.589	0.474	0.656
Word-of-Mouth	0.338	0.264	0.887

Both endogenous constructs produced Q^2predict values substantially above zero, indicating strong predictive relevance. The Q^2predict value for WOM (0.887) was particularly high, suggesting excellent predictive capability. Moreover, the relatively low RMSE and MAE values indicate limited prediction errors and further confirm the robustness of the proposed model.

Overall, the structural model demonstrated satisfactory explanatory power, strong predictive relevance, and statistically significant direct and indirect relationships among the examined constructs. The findings highlight the central role of Reference Groups and WOM in influencing Chinese ethnic students' decisions to select private higher education institutions in Medan.

5. Discussion

The present study investigated the determinants of private higher education institution (PHEI) choice among Chinese ethnic students in Medan, Indonesia, by examining the roles of Reference Groups, Tuition Fees, Location, and Word-of-Mouth (WOM). The findings reveal that all hypothesized relationships were statistically significant, confirming that both social and institutional factors influence students' university selection decisions. More importantly, WOM emerged as a significant mediating mechanism through which these factors shape students' enrollment decisions. These findings contribute to the growing literature on higher education marketing and student decision-making by demonstrating the importance of social influence and interpersonal communication within a culturally distinctive population.

Reference Groups and University Choice Decision

The results indicate that Reference Groups exerted the strongest positive influence on students' university choice decisions. This finding supports Reference Group Theory, which argues that individuals rely on significant others as sources of information, social approval, and behavioral guidance when making important decisions (Bearden & Etzel, 1982). The exceptionally large effect size observed in this study suggests that family members, relatives, friends, teachers, and alumni play a central role in shaping educational decisions among Chinese ethnic students.

This finding is consistent with previous studies demonstrating that parental influence and peer recommendations are among the most influential factors affecting university choice decisions (Chapman, 1981; Maringe, 2006; Joseph et al., 2012). In collectivist societies, educational decisions are often viewed as family decisions rather than purely individual choices (Hofstede, 2001). Within Chinese communities, educational attainment is traditionally regarded as a pathway to social mobility, economic success, and family prestige (Suryadinata, 2017). Consequently, students may prioritize recommendations from trusted reference groups when evaluating educational alternatives.

The magnitude of the effect observed in this study suggests that university marketing strategies targeting Chinese ethnic communities should extend beyond prospective students themselves and include influential family members and community networks. Institutions that successfully engage parents, alumni, and community leaders may gain a substantial competitive advantage in attracting prospective students.

Tuition Fees and University Choice Decision

The findings reveal that Tuition Fees positively influence university choice decisions, although the effect size is relatively small compared with Reference Groups. This result supports Human Capital Theory, which posits that education is viewed as an investment in future productivity and earnings (Becker, 1993). Students and their families appear to evaluate tuition fees not solely as costs but also as indicators of educational value and expected returns.

The positive relationship observed in this study suggests that Chinese ethnic students may associate higher tuition fees with better educational quality, institutional reputation, and future career opportunities. This finding aligns with previous studies indicating that tuition fees often serve as quality signals in educational markets (Ivy, 2010; Marginson, 2016). Rather than seeking the lowest-cost option, students may prioritize institutions perceived as offering superior value for money.

However, the relatively small effect size indicates that financial considerations are not the primary determinant of institutional choice. This finding contrasts with studies conducted among lower-income populations, where affordability frequently dominates educational decision-making (Heller, 1997). The result may reflect the socioeconomic characteristics of many Chinese ethnic households, which often place substantial emphasis on educational investment despite associated costs.

From a practical perspective, these findings suggest that private universities should focus not only on competitive pricing strategies but also on effectively communicating the value proposition associated with their educational offerings. Scholarship programs, flexible payment systems, and evidence of graduate employability may enhance students' perceptions of value and strengthen enrollment intentions.

Location and University Choice Decision

An interesting finding of this study is the significant negative relationship between Location and University Choice Decision. While previous research generally reports positive associations between accessibility and institutional attractiveness (Chapman, 1981; Kusumawati, 2013), the present findings suggest a more complex relationship among Chinese ethnic students in Medan.

Several explanations may account for this result. First, students may prioritize institutional reputation, academic quality, and social recommendations over geographic convenience. In highly competitive educational markets, students may be willing to travel greater distances if they perceive an institution as offering superior educational outcomes. Second, urban transportation infrastructure and increasing mobility may reduce the importance of physical proximity in university selection decisions. Third, the operationalization of location within this study may capture perceptions that differ from conventional accessibility measures.

The moderate effect size associated with Location indicates that geographical factors remain relevant but are secondary to social influences. This finding aligns with contemporary higher education research suggesting that institutional image and social reputation increasingly outweigh geographic

considerations, particularly in metropolitan environments where multiple institutions are accessible (Maringe, 2006).

Future studies should explore whether the negative relationship observed in this study reflects unique characteristics of Chinese ethnic students or broader shifts in student preferences within Indonesia's higher education sector.

Reference Groups and Word-of-Mouth Communication

The results demonstrate that Reference Groups significantly influence WOM communication and represent the strongest predictor of WOM in the model. This finding is consistent with Social Influence Theory and Diffusion of Innovation Theory, which emphasize the role of interpersonal networks in information transmission and opinion formation (Rogers, 2003).

Students who receive strong support and recommendations from family members, peers, and community members appear more likely to engage in positive discussions regarding educational institutions. These findings reinforce the notion that WOM is fundamentally embedded within social relationships and trust networks. In the context of Chinese ethnic communities, where interpersonal trust and long-term social relationships are highly valued, information shared through reference groups may carry exceptional credibility and influence.

The large effect size observed suggests that universities should actively cultivate relationships with alumni, parents, and current students, as these stakeholders function as important WOM generators capable of influencing future enrollment decisions.

Tuition Fees and Word-of-Mouth Communication

The positive relationship between Tuition Fees and WOM suggests that students are more likely to share positive experiences when they perceive tuition costs as reasonable relative to the quality of education received. This finding supports value-based marketing theories, which argue that consumer satisfaction and perceived value encourage positive recommendations and referrals (Kotler et al., 2022).

Although the effect size is relatively small, the significance of the relationship indicates that pricing perceptions contribute to students' communication behavior. Students who believe that a university offers good value for money may become advocates who recommend the institution to others. Consequently, effective pricing strategies can generate indirect marketing benefits through enhanced WOM communication.

Location and Word-of-Mouth Communication

The study also found a significant negative relationship between Location and WOM. Similar to the direct effect on university choice decisions, this finding suggests that location-related perceptions may not necessarily generate favorable interpersonal communication among respondents. One possible explanation is that location is viewed as a basic institutional attribute rather than a distinctive feature worth discussing with others.

Alternatively, students may focus their conversations on more salient characteristics such as academic quality, tuition affordability, and institutional reputation. This interpretation is consistent with consumer behavior literature suggesting that WOM is often driven by attributes perceived as unique, emotionally engaging, or highly consequential (Cheung & Thadani, 2012).

The Mediating Role of Word-of-Mouth Communication

One of the most important contributions of this study is the confirmation of WOM as a significant mediating mechanism. WOM significantly mediated the relationships between Reference Groups, Tuition Fees, Location, and University Choice Decision. These findings support the Information Adoption Model proposed by Sussman and Siegal (2003), which suggests that individuals adopt information transmitted through credible interpersonal channels.

The strongest mediation effect was observed in the relationship between Reference Groups and University Choice Decision, indicating that social influences are partially transmitted through

communication processes. In other words, family members, peers, and community members influence students not only directly but also indirectly by generating positive WOM regarding particular institutions.

This finding highlights the strategic importance of WOM in higher education marketing. Traditional promotional activities may be less influential than recommendations originating from trusted social networks. Consequently, universities seeking to attract students from collectivist cultural backgrounds should prioritize relationship-building strategies that encourage positive WOM generation.

Theoretical Contributions

This study contributes to the higher education marketing literature in several ways. First, it extends Reference Group Theory by demonstrating its applicability within the context of university choice among Chinese ethnic students in Indonesia. Second, it integrates Human Capital Theory, Spatial Choice Theory, and WOM Theory into a comprehensive framework explaining educational decision-making. Third, it provides empirical evidence regarding the mediating role of WOM, an area that remains relatively underexplored in higher education research.

Most importantly, the findings highlight the importance of cultural context in shaping educational decisions. The dominant role of Reference Groups suggests that theories developed primarily in Western contexts may require adaptation when applied to collectivist societies characterized by strong family and community influences.

Practical Implications

The findings provide several practical implications for private higher education institutions. Universities should strengthen engagement with parents, alumni, and community leaders, as these stakeholders significantly influence students' decisions. Institutions should also invest in student satisfaction initiatives capable of generating positive WOM. Furthermore, marketing strategies should emphasize educational value rather than price competition alone. Finally, universities should recognize that institutional reputation and social endorsement may be more influential than physical location in attracting prospective students.

6. Conclusion

This study examined the determinants of private higher education institution choice among Chinese ethnic students in Medan, Indonesia, by analyzing the roles of Reference Groups, Tuition Fees, Location, and Word-of-Mouth (WOM) communication. The findings demonstrate that all hypothesized relationships are statistically significant, confirming the importance of both social and institutional factors in shaping students' enrollment decisions.

Among the examined predictors, Reference Groups emerged as the most influential determinant of both WOM and University Choice Decisions. This result indicates that family members, relatives, peers, teachers, alumni, and other influential social actors play a central role in guiding educational decisions among Chinese ethnic students. The findings reinforce the argument that educational choices within collectivist cultures are strongly embedded within social networks and interpersonal relationships.

The study further reveals that Tuition Fees positively influence both WOM and University Choice Decisions. This suggests that students evaluate tuition fees not merely as financial costs but also as indicators of educational value and future benefits. Although the magnitude of this influence is smaller than that of Reference Groups, tuition affordability and perceived value remain important considerations in the university selection process.

Interestingly, Location exhibits a significant negative influence on both WOM and University Choice Decisions. This finding suggests that geographical accessibility may not constitute a primary determinant of university choice among Chinese ethnic students in Medan. Instead, social recommendations, institutional reputation, and perceived educational quality appear to outweigh physical proximity considerations.

The findings also confirm the significant role of WOM as both a direct predictor and a mediating

mechanism. WOM positively influences University Choice Decisions and significantly mediates the effects of Reference Groups, Tuition Fees, and Location on students' enrollment decisions. This result highlights the strategic importance of interpersonal communication in reducing uncertainty and shaping perceptions of institutional attractiveness.

Overall, the study demonstrates that social influence and communication processes are more influential than purely institutional characteristics in explaining private university choice among Chinese ethnic students. The proposed model exhibits strong explanatory and predictive power, providing robust empirical support for the integration of Reference Group Theory, Human Capital Theory, and Word-of-Mouth Communication Theory in understanding higher education decision-making.

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