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Intention to pursue a master degree of final year students: Empirical research from Hanoi university of industry

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Abstract

Nowadays, pursuing a master degree in economics and engineering is becoming an inevitable trend in the era of international integration because of benefits of its holders. This research aims to clarify the factors that influence of the intention to pursue master degree of final year students. To reach the end, this research based on the theory of planned behavior (TPB), benefit-cost theory, and the motivation-opportunity-ability model (MOA). The research utilizes both qualitative and quantitative methods. The collected data was analyzed by using SPSS 26 and AMOS 24. This research showed the benefits and costs influence on perceived value which in turn have effect on intention to pursue master degree of final year students. Furthermore, the subjective norm does not influence on the intention, contrary to previous studies that have shown its significance. This will help schools better understand students' psychology and devise appropriate encouragement and motivation policies.

Keyword: Intention to Study; Master Degree; Costs – Benefits Theory; Motivation - Opportunity - Ability; Planned Behavior; Perceived Value.

1. Introduction

Pursuing a master degree is increasingly popular in modern society. It signifies not just an enhancement in educational attainment but also unlocks numerous opportunities for students' future endeavors. Pursuing a master degree represents a significant turning point, indicative of a transformation in thinking, knowledge, and skills, aligning with the growing demands of the labor market.

In Vietnam, master programs offer students comprehensive knowledge, broadening their employment prospects and avenues for advancement. This contributes to creating a competitive advantage for students in the labor market, particularly in an environment that increasingly demands high levels of professional qualifications. Pursuing a master degree aids students in honing critical thinking, problem-solving abilities, as well as enhancing communication and teamwork skills. Furthermore, students have the opportunity to interact with numerous experts in their respective fields, expanding their professional network and benefiting from the experiences of those who have come before them. Research conducted by Xuan Giang Pham and Thi Phuong Thao Nguyen (2020) [1] demonstrates that attitude and behavioral control significantly influence students' intentions to pursue a master degree. Furthermore, Truc Vi Ho and Trong Nhan Phan (2018) [2] have broadened the scope by incorporating the loyalty factor into the model, representing a significant advancement in comprehending its impact. This research specifically focuses on students' intentions to pursue a master degree.

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Lieng Diem Doan and colleagues (2022) [3] have reached significant conclusions in their research on the factors influencing intentions to pursue graduate studies in tourism management. Their study not only identified the subjective norm factor but also introduced the 'Social Needs' factor to the model, thereby facilitating a deeper understanding of how external factors can impact students' decisions. Furthermore, factors associated with the institution and training facilities also play a role in shaping intentions to pursue a master degree. Research conducted by Xuan Giang Pham and Thi Phuong Thao Nguyen (2020) [1], as well as Truc Vi Ho and Trong Nhan Phan (2018) [2], has shed light on how these factors influence student's decisions.

Research conducted worldwide incorporates elements of intention to pursue a master degree based on theories such as the Theory of Planned Behavior, the Theory of Benefits and Risks, and the Motivation-Opportunity-Capacity model. Scholars like Maura Borrego and David B. Knight (2018) [4], P. Iwan Kurniawan (2021) [5], and Wei-Loon Koe (2017) [6] have offered a comprehensive and multi-dimensional perspective on the group of benefit and risk factors influencing intention. From self-efficacy to perceived risk, every aspect is meticulously examined. Moreover, research by Jisun Jung and Soo Jeung Lee (2019) [7] demonstrates the correlation between factors such as gender, age, and economic conditions with the intention to pursue a master degree, facilitating a deeper understanding of their influence on students' decisions. However, studies by Maura Borrego and David B. Knight (2018) [4] suggest that once additional factors are included in the models, gender and racial/ethnic differences may not be as pronounced.

In identifying the factors influencing the intention to pursue a master degree, three main groups of factors have been delineated: personal intrinsic values, external influences, and characteristics of the training institutions. However, a notable weakness in current studies is their exclusive focus on the interaction between variables in isolation, neglecting the assessment of demographic factors' influence on the intention to pursue a master degree. An essential concept in economics, the opportunity cost, is introduced to elucidate the impact of perceived value on the decision-making process regarding the pursuit of a master degree. Despite studies emphasizing the significance of perceived value in this decision-making process, a definitive and specific relationship has yet to be established. Therefore, a primary objective of this study is to delve deeper into this relationship to gain a better understanding of how perceived value influences senior students' decisions regarding their intention to pursue a master degree.

Therefore, the objective of this study is to provide insights to Hanoi University of Industry regarding final-year students' intentions to pursue a master degree. Subsequently, the institution can consider implementing policies and strategies aimed at enhancing the intention to pursue master degrees. This study seeks to address the following questions:

Firstly, what are the factors influencing the intention of final-year students at Hanoi University of Industry to pursue a master degree?

Secondly, what is the direction and magnitude of the influence of these factors on the intention to pursue a master degree among final-year students at Hanoi University of Industry?

Finally, what recommendations can be proposed to inform management decisions aimed at improving policies, training regulations, and student enrollment for master degree programs?

2. Background theories

2.1. Theory of planned behavior

The Theory of Planned Behavior, introduced by Ajzen in 1991 [8], elucidates the relationship between an individual's beliefs and their behavior, categorizing beliefs into three main types: behavioral beliefs, normative beliefs, and self-control beliefs.

Ajzen (1988) posits that intention is influenced by three key factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. This theory finds widespread application in research concerning consumer intentions and behaviors. For instance, Armitage and Conner (2001) [9] demonstrate that the Theory of Planned Behavior effectively predicts intentions and behaviors related to environmental protection activities such as energy conservation and recycling. Similarly, research conducted by Sheeran and Webb (2006) [10] successfully predicts intentions and behaviors associated with health-related activities like exercise and healthy eating.

2.2. The Benefit-cost theory

The Benefit-Cost Theory shares similarities with several other action theories, including the Theory of Reasoned Action and its psychological offshoots (e.g., Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980), as well as specific applications to participation surveys (Hox et al., 1995). It also resonates with the leverage-salience theory in survey methodology (Groves et al., 2000), and various cost-benefit perspectives within economics (Dunn and Gordon, 2005), which all presume that individuals will act in accordance with their perception of the benefits and costs associated with a decision.

$$\text{Perceived Value} = \frac{\text{Perceived Benefits}}{\text{Cost}}$$

The concept of perceived value is defined as the discrepancy between the total benefits received and the total costs incurred for a product or service, as assessed by a potential customer (Philip Kotler and Kevin Lane Keller) (Giang and Thao, 2019) [1].

The Benefit-Cost Theory finds application in numerous studies for comparing factors and assessing the benefits and costs of policy projects. For instance, research by Cialdini (2007) [11] indicates that the cost-benefit theory effectively predicts the intentions and behaviors associated with donating to charity. Similarly, studies conducted by Kotler and Keller (2012) [12] demonstrate that the benefit-cost theory can accurately predict consumers' purchasing intentions and behaviors.

2.3. Motivation - opportunity - capacity model

The MOA (Motivation, Opportunity, Ability) model was initially proposed by MacInnis and Jaworski in 1989 [13]. According to this model, the extent to which individuals process information to make decisions is influenced by three primary factors: Motivation, Opportunity, and Ability. The MOA model has been widely applied in various studies. For example, research conducted by Eccles and Wigfield (2002)[14] elucidates students' participation in math and science activities. Additionally, Bandura's study in 1997[15] demonstrates that the Motivation-Opportunity-Ability model effectively explains individual career choices.

3. Hypothesis and research model

3.1. The relationship between perceived benefits and perceived value

Perceived benefits, as outlined by Rasha Elhage [15], can be categorized into two main groups: personal benefits for graduates and incentives that facilitate the completion of graduate studies. Personal benefits encompass aspects such as personal satisfaction, enhanced knowledge within a profession or discipline, and career advancement opportunities such as promotions and salary increase. Additionally, supporting benefits may include the perceived quality of the program and the financial accessibility of graduate studies.

When students contemplate pursuing a master degree, they assess the perceived benefits associated with it. These benefits, within the scope of this research, include self-improvement, enhanced job prospects, opportunities for tuition exemptions, and incentives offered by the educational institution. The more tangible and significant these benefits appear to students, the more appealing the prospect of pursuing a master degree becomes.

Self-improvement serves as a psychological tool that individuals utilize to navigate interactions with society, their community, and themselves. Within the structure of personality, 'self-worth' emerges as a driving force. For instance, life is not solely about mere 'survival'(existence); it also encompasses notions of 'sharing, responsibility, dedication, and conscience'. In Maslow's Hierarchy of Needs (1943) [16], self-actualization primarily corresponds to the fourth level, which pertains to the need for 'Respect'. This level involves self-actualizing needs, wherein individuals seek to utilize their full abilities and potential to assert themselves, contribute to society through work, and achieve tangible results. This pursuit involves actively developing one's skills, intelligence, and capabilities to attain a sense of satisfaction and fulfillment.

The findings from in-depth interviews reveal that all five out of five interviewed respondents, who are final-year students at Hanoi University of Industry, express a need to pursue a master degree to enhance their knowledge and professional skills, thereby facilitating personal growth and expanding expertise within their areas of interest.

3.1.1. Hypothesis H1: Self-improvement positively influences perceived value

Job opportunities encompass various aspects: (1) *Career Enhancement*: Many students perceive a master degree as a pathway to advancing their careers. They recognize that higher education can unlock better job prospects, higher salaries, and more significant roles within their chosen fields. (2) *Expertise*: Certain occupations demand specialized knowledge and skills attainable only through further education. Pursuing a master degree enables students to acquire expertise in specific domains, rendering them more appealing to potential employers. (3) *Competitive Advantage*: In a fiercely competitive job market, holding a master degree can confer a competitive edge. Students believe that possessing this advanced qualification will differentiate them from other candidates, enhancing their prospects of securing coveted job positions. (5) *Professional Networking*: Master programs often offer opportunities for students to build professional networks and engage with industry experts. These connections can pave the way for job offers and career advancement opportunities. (6) *Skills Development*: Further education fosters the development of crucial skills and knowledge highly sought after by employers. Students recognize that a master degree equips them with the requisite tools to excel in their careers.

Additionally, the findings from the in-depth interviews conducted by the group indicate that 7 out of 9 respondents, who are students currently pursuing a Master degree at Hanoi University of Industry, expressed the view that pursuing a Master degree enhances job opportunities.

3.1.2. Hypothesis H2: Job opportunities exert a positive influence on perceived value

School incentives, such as scholarships, grants, financial support, and exemptions from English language requirements, exert a positive impact on students' perceived value and their intention to pursue a master degree. Moreover, factors associated with the school and training facility also play a crucial role in shaping perceived value and intention to study for a master degree. The reputation of the school and the quality of the training program have been shown to positively influence intention, as demonstrated in the research article by Pham Xuan Giang and Thi Phuong Thao Nguyen (2020) [1].

3.1.3. Hypothesis H3: School incentives positively influence perceived value

The relationship between perceived cost and perceived value

Perceived Costs: Students carefully evaluate the diverse costs associated with pursuing a master degree, including personal capacity and family conditions. The higher these perceived costs, the more students may question the value of obtaining a master degree. Building upon the group's cost-benefit model, the following hypotheses are proposed:

Self-efficacy serves as a mechanism to mitigate costs such as the time, expense, and effort students must invest in pursuing a master degree. These factors act as barriers and become significant considerations when students contemplate pursuing advanced education. To engage in their master degree program, students must navigate trade-offs associated with the aforementioned factors. Additionally, personal capacity encompasses students' ability to assimilate lectures and professional knowledge. Attitude and perceived behavioral control are also factors considered in the research conducted by Xuan Giang Pham and Thi Phuong Thao Nguyen (2020) [1].

3.1.4. Hypothesis H4: Self-efficacy negatively influences perceived value

During the two-year duration of pursuing a master degree, students incur expenses such as travel, living costs, and tuition fees. These financial investments in obtaining a master degree often require support from parents, particularly for recent graduates who may not yet have a stable income. Consequently, family conditions can exert a negative impact on students' perceived value. Research findings by Jisun Jung and Soo Jeung Lee (2019) [7] indicate that factors such as gender, age, and family economic status influence students' decisions regarding pursuing a master degree.

3.1.5. H5: Family conditions negatively influence perceived value

The relationship between perceived value and intention to study master degree

The perceived value associated with obtaining a master degree hinges on the equilibrium between perceived benefits and perceived costs. If the cost of pursuing a master degree is deemed reasonable and justifiable in comparison to the potential benefits, students are more inclined to perceive it as a valuable investment for their future. Conversely, if the costs outweigh the benefits, students may question the value proposition of obtaining the degree.

For many prospective master degree students, who perceive high value in terms of career advancement, specialized knowledge, and personal growth, this perception may bolster their intention to pursue a master degree. Research conducted by Quang Vinh Nguyen and colleagues (2021) [17] in the field of education introduced the intermediary factor "perceived value" based on the findings of Zeithaml (1988), which demonstrated a weak yet positive direct influence of this factor on the intention to enroll in graduate school.

3.1.6. H6: *Perceived value positively influences students' intention to pursue a master degree*

The relationship between subjective norms and intention to study master degree

Subjective norm is defined as an individual's perception of the social pressures that influence their decision to engage in certain behaviors [18]. In the context of students contemplating pursuing a master degree, subjective norms represent the perceived social pressure or influence from friends, family, educators, or other significant individuals in their lives. Subjective norms wield considerable influence on students' intentions regarding master degree pursuits. If students receive encouragement and support from friends, teachers, parents, or close relatives to pursue higher education, it can positively sway their intention. Research conducted by Doan Lieng Diem and colleagues (2022) [3], applying the Theory of Planned Behavior (Ajzen, 1991) [8], substantiates the significant impact of subjective norms on students' intentions to pursue a master degree.

3.1.7. H7: *Subjective norms positively impact students' intention to study for a master degree*

The relationship between school image and intention to study master degree

School reputation: The reputation of an educational institution, cultivated over years or even decades, holds sway over student intentions. A prestigious and esteemed institution is likely to attract students who value the recognition and validation associated with earning a degree from such a school. An institution's reputation is gauged through factors such as esteem, trust, shared sentiments, and respect [19]. It is intertwined with academic excellence, faculty expertise, and the institution's research standing and track record of producing successful graduate students.

Both the reputation and image of the school have been confirmed to positively impact intention in the research conducted by Xuan Giang Pham, Thi Phuong Thao Nguyen (2020) [1], and the study by Truc Vi Ho and Trong Nhan Phan (2018) [2], based on the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB). These studies surveyed 432 students at Ho Chi Minh City Industrial University about their intentions to pursue graduate studies.

H8: The school image positively influences students' intention to study master degree

Proposed research model

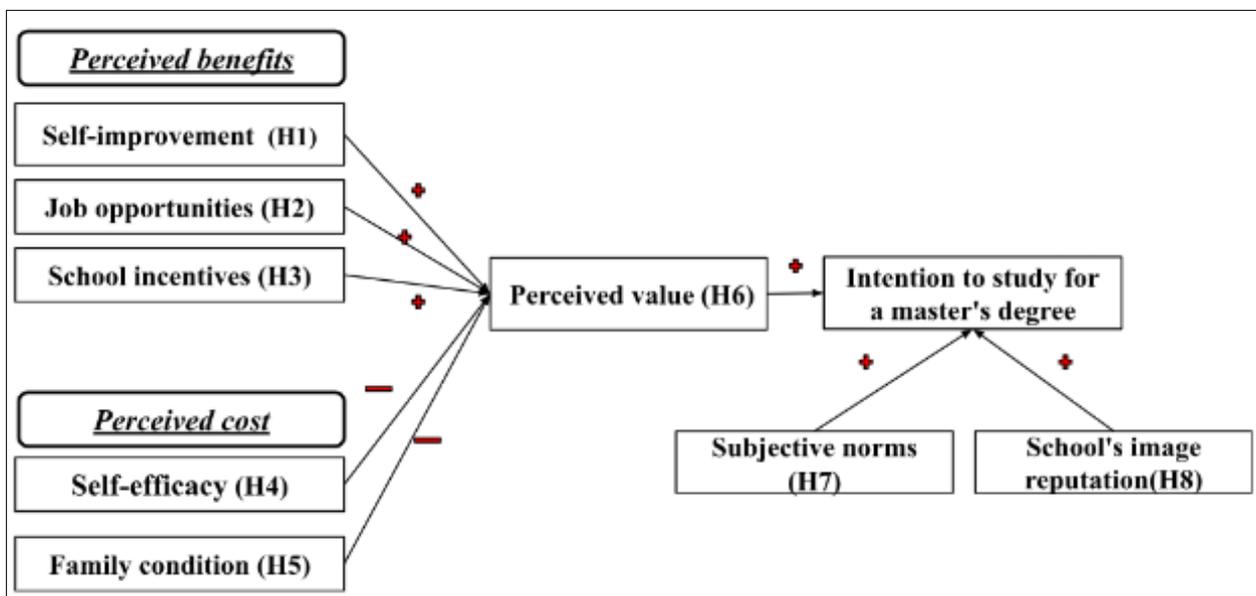


Figure 1 Research model

4. Research methods

4.1. Qualitative methods

The research team employs qualitative research methods to collect, analyze, and interpret data that cannot be quantified. Specifically, in this case, the in-depth expert interview method was utilized to calibrate the scale after conducting group discussions with students who are currently enrolled in a master degree program at the school, as well as with fifth-year students nearing graduation.

4.2. Quantitative method

Quantitative research begins with the design of a questionnaire, followed by testing and adjusting the survey scale to create a comprehensive survey. Subsequently, an official survey is conducted to collect data, which is then processed. Data analysis and processing are performed using SPSS 26 and Amos 24 software.

5. Results and analysis

5.1. Qualitative research

Preliminary research employs qualitative methods through in-depth interviews. Within the research scope at Hanoi University of Industry, the team categorized the subjects to be interviewed into two main groups:

The first target group selected consists of 'final-year students from all faculties. The obtained results indicate that all these students are aware of the importance of pursuing a master degree to enhance personal development, knowledge improvement, and job opportunities. Therefore, their intention to pursue a master degree is high. Factors motivating their choice of school include personal needs, facilities, and the school's teaching staff. Additionally, they mentioned family situations, tuition fees, and study pressure as barriers to pursuing a master degree.

The second target group comprises 'students who are currently enrolled in a master degree program'. This group, having real-life learning experiences, contributes significantly to developing solutions. The results reveal that all of them study to enhance their knowledge and career prospects. Their decision to pursue further education is influenced by both internal and external factors, such as family, friends, and encouragement from teachers. They perceive study pressure, program speed, and time management as the main difficulties, although they highly appreciate the professionalism and knowledge depth of the lecturers. However, they also point out limitations in knowledge acquisition and a lack of experiential learning in the curriculum. To address these issues, they suggest the school provide more incentives, supplement textbooks, and incorporate practical experiences for students.

5.2. Quantitative research

Quantitative research: After sending out the survey forms, the research team collected 224/230 valid survey samples. The research team then encoded the data, inputted it into SPSS 26 and Amos 24 for analysis.

5.3. Descriptive statistics

Regarding gender: Among the 224 valid survey forms, the difference between males and females is not significant. The team used a convenient sampling method with the condition that final-year students at Hanoi University of Industry, the results are completely reasonable.

Faculty: The survey forms were randomly distributed to students studying at Hanoi University of Industry. The results show that the majority of students surveyed belong to the Faculty of Business Administration (29.9%), while the rest are from other faculties. Cumulative GPA: The majority of participating students have good to excellent academic performance, with 44.2% being in the good category and 37.9% in the excellent category, while the remaining students are outstanding and average. Relationship between work and field of study: The majority of student participants in the survey have jobs related to their field of study, accounting for 79%, indicating that they are choosing the right career path in their own field, while the remaining students have jobs unrelated to their field of study, accounting for a smaller proportion. Family income: The majority of the respondents' family backgrounds fall into the average to good category, with 56.7% and 31.3% respectively, while the rest are in the relatively affluent category. Goal of pursuing a master degree: Most students believe that pursuing a master degree helps them secure better job opportunities (37.5%) and advance in their careers (31.25%). The remaining students aim to become lecturers and earn higher salaries, accounting for 25% and 6.25% respectively.

The results of the reliability test show that the overall reliability coefficient of the scales is satisfactory and no observation has a correlation coefficient with the total variable less than 0.3, the Cronbach's Alpha of all variables are bigger than 0.6, range from 0.647 to 0.871. Therefore, all observed variables meet the standards.

5.4. Evaluation Factor Analysis (EFA)

Eigenvalue coefficients of 7 independent variables are all > 1 so all 5 variables are retained in the model. The total variance extracted from the 7 variables is 58.614% $> 50\%$. Therefore, the model is valid. The variables explain 58.614% of the model's variability.

Table 1 Varimax rotation matrix of independent variables

	Component						
	1	2	3	4	5	6	7
CCQ1	0.791						
CCQ2	0.690						
CCQ3	0.767						
CCQ4	0.817						
NLBT1		0.725					
NLBT2		0.780					
NLBT3		0.652					
NLBT4		0.780					
DKGD1			0.790				
DKGD2			0.627				
DKGD3			0.725				
DKGD4			0.780				
HTBT1				0.757			
HTBT2				0.743			
HTBT3				0.623			
HTBT4				0.739			
DTHA1					0.645		
DTHA2					0.697		
DTHA3					0.751		
DTHA4					0.760		
UD1						0.706	
UD2						0.709	
UD3						0.787	
UD4						0.527	
CHVL1							0.560
CHVL2							0.661
CHVL3							0.725
CHVL4							0.787

The analysis results show that the loading coefficients of the observed variables are all > 0.5, satisfying the condition, so they are all retained. The observed variables of each independent variable are loaded into the same group. The 7 independent variables of the model are loaded distinctly into 7 different groups, indicating no correlation between the independent variables. The model is completely appropriate.

5.5. Determine the EFA exploratory factor analysis dependent variable

Table 2 KMO coefficient of the dependent variable GTCN

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.695
Bartlett's Test of Sphericity	Approx. Chi-Square	196.853
	df	6
	Sig.	0.000

The KMO coefficient of the independent variables reaches $0.695 > 0.5$, indicating that the observed variables are necessary to form a factor and all observed variables are correlated with each other in the overall and factor analysis is appropriate for the research data (Sig. = $0.000 < 0.05$), satisfying the conditions of factor analysis and the data used for factor analysis is completely appropriate.

The Eigenvalue coefficient of the dependent variable is $2.212 > 1$, so the dependent variable is retained in the model. The total variance extracted from the variables is $55.301\% > 50\%$. Therefore, the model is valid. The dependent variable explains 55.301% of the model's variation.

The analysis results show that the loading coefficients of the observed variables are all > 0.5, meeting the conditions so they are all retained. The observed variables of the dependent variable are loaded into the same group. The model is completely appropriate.

The KMO coefficient of the independent variables reaches $0.818 > 0.5$, indicating that the observed variables are necessary to form a factor and all observed variables are correlated with each other in the overall and factor analysis is appropriate for the research data (Sig. = $0.000 < 0.05$), satisfying the conditions of factor analysis and the data used for factor analysis is completely appropriate.

The Eigenvalue coefficient of the dependent variable is $2.890 > 1$, so the dependent variable is retained in the model. The total variance extracted from the variables is $72.247\% > 50\%$. Therefore, the model is valid. The dependent variable explains 72.247% of the model's variation.

The analysis results show that the loading coefficients of the observed variables are all > 0.5, meeting the conditions so they are all retained. The observed variables of the dependent variable are loaded into the same group. The model is completely appropriate.

5.6. The results of the CFA

All Model Fit indices are at a good level: Chi-square/df = $1.113 < 2$; GFI = $0.901 > 0.9$; CFI = $0.981 > 0.9$; RMSA = $0.022 < 0.06$; PCLOSE = $1.000 > 0.05$

Therefore, the model fits the data.

Table 3 Standardized Regression Weights

			Estimate
CCQ1	←	fCCQ	0.661
CCQ2	←	fCCQ	0.583
CCQ3	←	fCCQ	0.724
NLBT1	←	fNLBT	0.704

NLBT2	←	fNLBT	0.635
NLBT4	←	fNLBT	0.788
HTBT2	←	fHTBT	0.678
HTBT3	←	fHTBT	0.527
HTBT4	←	fHTBT	0.745
DTHA2	←	fDTHA	0.704
DTHA3	←	fDTHA	0.556
DTHA4	←	fDTHA	0.780
CHVL2	←	fCHVL	0.522
CHVL3	←	fCHVL	0.563
CHVL4	←	fCHVL	0.770
GTCN1	←	fGTCN	0.564
GTCN2	←	fGTCN	0.543
GTCN3	←	fGTCN	0.526
GTCN4	←	fGTCN	0.727

All standardized coefficients are greater than 0.5. Therefore, all observed variables are significant in CFA.

5.7. SEM Analysis

Variables HTBT, NLBT, DTHA, DKGD, and GTCN are significant in the model as sig < 0.05

Table 4 Implied (for all variables) Covariances

			Estimate
fGTCN	←	fHTBT	0.476
fGTCN	←	fUD	0.050
fGTCN	←	fCHVL	- 0.041
fGTCN	←	fNLBT	0.796
fGTCN	←	fDKGD	0.140
fYD	←	fCCQ	- 0.009
fYD	←	fDTHA	0.325
fYD	←	fGTCN	0.718

The order of standardized regression coefficients shows the order of the effects of factors on variables

Table 5 Squared Multiple Correlation

Variable under the influence	Normalization coefficient
GTCN	0.961
YD	0.621

The R² value with the regression of the dependent variable GTCN is 0.961. Therefore, the independent variables NLBT, HTBT, and DKGD explain 96.1% of the variation in the variable GTCN. The R² value with the regression of the dependent variable YD is 0.621. Therefore, the independent variables GTCN and DTHA explain 62.1% of the variation in the variable YD.

5.8. Testing the mediating variable "Perceived Value"

- Evaluating the mediation relationship is a way to assess the relationship from the independent variable to the dependent variable when there is an intervening variable in this relationship. Analyzing the mediation model means analyzing the intervention of the mediating variable, which will create a type of effect called "indirect effect."
- The intervening variable in the cause-effect relationship from the independent to the dependent variable in this study is the variable GTCN (perceived value). Processing the mediating variable means evaluating whether the mediating variable actually intervenes in the relationship between the independent and dependent variables, and if so, how it intervenes.

Table 6 Testing the indirect effects

Relationships	Indirect	
	S.ES	Sig.
HTBT > GTCN > YD	0.342	0.007
NLBT > GTCN > YD	0.571	0.002
ĐKGD > GTCN > YD	0.101	0.05

The test group of the three-factor relationship "Self-Improvement", "Self-Efficacy", "Family Conditions" affecting "Intention" through the mediating variable "Perceived Value" via SEM analysis shows the results:

Self-Improvement affects Intention through the mediating variable "Perceived Value" with a standardized coefficient of 0.342, sig= 0.007 > Fits the model.

Self-Efficacy affects Intention through the mediating variable "Perceived Value" with a standardized coefficient of 0.571, sig= 0.002 > Fits the model.

Family Conditions affect Intention through the mediating variable "Perceived Value" with a standardized coefficient of 0.101, sig= 0.05 > Fits the model.

The first research hypothesis (H1) posits that HTBT positively influences industrial value. Analysis of the investigation results indicates a positive impact of HTBT on industrial value (Sig < 0.05 and Beta Coefficient = 0.476 > 0).

The second research hypothesis (H2) suggests that CHVL positively affects industrial value. However, the analysis results show that CHVL is not significant in the research model (Sig = 0.554 > 0).

The third research hypothesis (H3) proposes that UD has a similar impact on GTCN. Nevertheless, the research findings demonstrate that UD is not significant in the research model (Sig = 0.523 > 0).

The fourth research hypothesis (H4) indicates that competitive energy negatively influences industrial value. The investigation results reveal that NLBT impacts industrial value positively (Sig < 0.05 and Beta Coefficient = 0.796 > 0).

The fifth research hypothesis (H5) suggests that trading registration has a negative effect on industrial value. However, the investigation results indicate that trading registration impacts industrial value in the same direction (Sig = 0.036 < 0 and Beta Coefficient 0.140 > 0).

The sixth research hypothesis (H6) proposes that CCQ positively impacts students' master degree studies. However, according to the results obtained, CCQ is not significant in the model (Sig = 0.897 > 0).

The seventh research hypothesis (H7) suggests that DTHA positively influences students' master degree studies. Survey results demonstrate that DTHA positively affects students' ability to pursue a master degree (Sig < 0.05 and Beta coefficient = 0.325 > 0).

The final research hypothesis (H8) proposes that industrial recognition affects students' master degree education in the same direction. As anticipated, survey results reveal that professional recognition has a positive impact on students' master degree qualifications (Sig < 0.05 and Beta coefficient = 0.718 > 0).

Upon analyzing the SPSS and AMOS results, we observe that in the research model proposed by the team, 5 out of 8 hypotheses are accepted: HTBT, NLBT, DTHA, DKGD, and GTCN are significant in the model. There are 2 dependent variables: GTCN and YD. The NLBT variable in the perceived cost group and the HTBT variable in the perceived benefit group both exert the same impact on the first dependent variable, industrial value, explaining 96.1% of the variation in this dependent variable. The order of influence is as follows: the strongest influence is NLBT followed by HTBT. The GTCN variable and the DTHA variable similarly impact the second dependent variable, YD, and explain 62.1% of the variation in this dependent variable. The strongest impact is exerted by the GTCN variable, followed by the DTHA variable.

6. Research discussion

Theoretically, this study has incorporated the cost-benefit theory and the MOA model (Motivation - Opportunity - Ability) into the investigation of intention and behavior regarding the pursuit of a master degree. Conducted by final-year PhD students at Hanoi University of Industry, the study showcases those factors influencing the intention to pursue a master degree encompass personal attributes, external stimuli, and educational institutions. Specifically, these factors include self-improvement, personal capacity, family circumstances, perceived value, and institutional reputation and image. Notably, the study delves into the interconnectedness of three independent variables: self-improvement, self-efficacy, and family conditions, mediated by perceived value, drawing upon the research of Quang Vinh Nguyen and colleagues (2021) [2], which applies mediating variables of 'perceived value', and the work of Maura Borrego and David B. Knight (2018) [5], which examines factors related to costs and benefits albeit in a fragmented manner.

However, the research findings of the group do not substantiate the influence of subjective norms, school incentives, and job opportunities on intention, despite numerous prior studies confirming their significant impact on the intention to pursue a master degree. These factors have been extensively explored in research conducted by Xuan Giang Pham, Thi Phuong Thao Nguyen (2020) [1], Truc Vi Ho and Trong Nhan Phan (2018) [3], and Lieng Diem Doan and colleagues (2022) [4], among others.

6.1. Proposal: Implications for Self-Improvement

The factor 'Self-improvement' exerts a positive influence on 'Perceived value' (Sig < 0.007 and Beta coefficient = 0.342 > 0), elucidating 34.2% of the variance in 'Intention' through 'Perceived value'. To foster self-improvement, the school could provide support through career counseling and delineate career paths for final-year students. Organizing mentorship programs and encouraging student participation in research and scientific projects, as well as startup initiatives, can further enhance self-improvement initiatives.

6.2. The Suggestion: Implications for Self-Competence

'Self-competence' manifests an opposing impact on 'Perceived Value' (Sig < 0.002 and Beta Coefficient = 0.571 > 0), explaining 57.1% of the variance in "Intention" through 'Perceived Value'. To bolster self-competence, the school should focus on furnishing students with valuable information, knowledge, and appropriate programs. Additionally, the development of financial support policies for students can further fortify their sense of self-competence.

6.3. The Recommendation: Implications for Family Conditions

'Family conditions' negatively affect 'Perceived value' (Sig = 0.05 < 0 and Beta Coefficient 0.101 > 0), explaining 10.1% of the variance in 'Intention' through 'Perceived treatment'. To address family-related concerns, the school should engage in communication efforts aimed at elucidating the benefits and necessity of pursuing a master degree to students' families.

6.4. Implication for Perceived Value: Recommendation

'Perceived value' emerges as a critical factor positively influencing students' intention to pursue a master degree. With a significance level below 0.05 and a Beta coefficient of 0.718, this factor exerts a substantial impact on students' intention, accounting for 71.8% of the variance in 'Intention'. To leverage perceived value, the school should intensify efforts to raise awareness about the significance of pursuing a Master degree. Providing comprehensive information to students to elucidate the allure of studying at the school can further enhance perceived value.

6.5. The Proposal: Implications for the School's Image and Reputation

The 'School's image reputation' significantly influences students' intention to pursue a master degree in the same direction (Sig <0.05 and Beta coefficient = 0.325>0), explaining 32.5% of the variance in 'Intention'. To bolster the school's image and reputation, the institution should focus on social media engagement, foster positive relationships with students, and enhance the reputation of its academic departments. Regular evaluations of lectures to ensure alignment with the school's objectives can further enhance the institution's reputation.

7. Conclusion

As indicated in the research problem statement, the primary objective of this study is to examine the influence of various factors on students' behavioral intentions and suggest implications for educational institutions. Furthermore, future research should aim to broaden the scope of variables under consideration. For instance, exploring additional factors such as training program effectiveness, training quality, and environmental dynamics would contribute to a more comprehensive understanding of the subject matter. Additionally, future studies could expand the research scope to include a broader range of activity spaces and investigate demographic variables in relation to the dependent variable. Such endeavors would facilitate a more nuanced exploration of the factors impacting students' intentions and provide valuable insights for educational institutions to enhance their strategies and support mechanisms.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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