



**A CASE STUDY OF THE IMPACT OF FINANCIAL
MANAGEMENT COMPETENCE ON CAREER GROWTH OF
UNDERGRADUATE STUDENTS OF BEIJING INSTITUTE OF
PETROCHEMICAL TECHNOLOGY**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION
GRADUATE SCHOOL OF BUSINESS
SIAM UNIVERSITY**

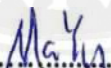
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This Independent Study Has Been Approved as a Partial Fulfillment of the
Requirements for the Degree of Master of Business Administration

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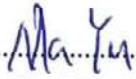
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Title: A Case Study of the Impact of Financial Management Competence on Career Growth of Undergraduate Students of Beijing Institute of Petrochemical Technology

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ABSTRACT

Financial management competence has increasingly been recognized as a critical factor influencing the career development of university students, particularly in the context of China's rapidly evolving labor market. Many undergraduates face challenges in allocating limited financial resources to support both short-term educational needs and long-term professional goals, while also coping with financial risks that may affect their career trajectories. This study sought to address these issues by examining how different dimensions of financial management competence shape career growth among undergraduates. The objective of the study was to examine the impact of financial planning for career education, financial planning for long-term goals, and financial risk coping ability on the career growth of undergraduate students.

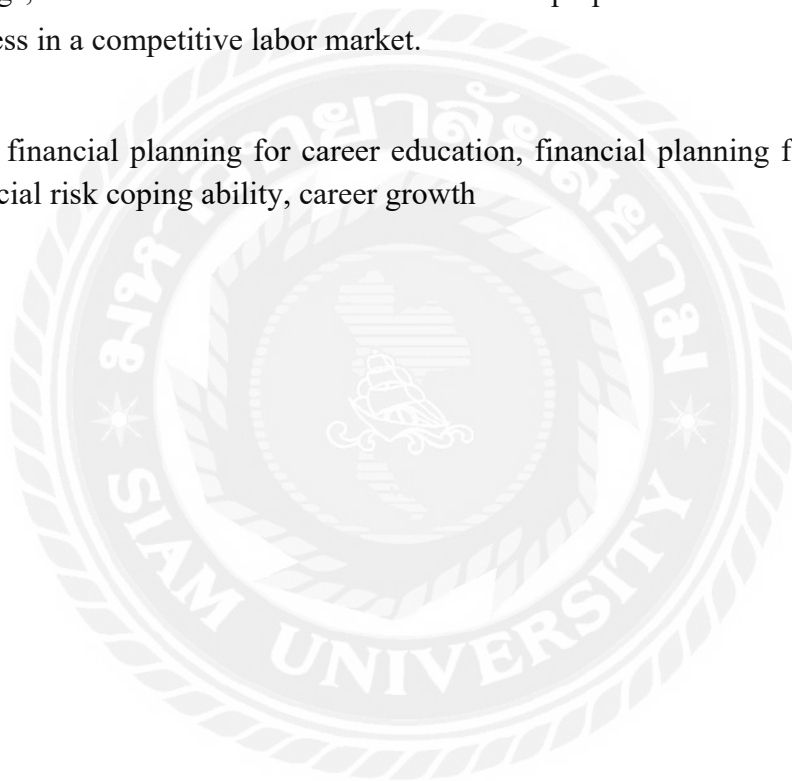
A quantitative research design was employed, and data were collected from 300 undergraduate students of Beijing Institute of Petrochemical Technology during the 2024–2025 academic year. Stratified random sampling was used to ensure representation across year levels and majors. A structured questionnaire measured the study variables using five-point Likert scales, while demographic data were also obtained. The reliability and validity of the instrument were established through pilot testing, Cronbach's alpha coefficients, and KMO values. Data were analyzed using descriptive statistics, correlation, regression, and structural equation modeling with SPSS and SmartPLS.

The findings showed that all three dimensions of financial management competence had significant positive effects on career growth. Financial planning for career education enhanced employability by enabling students to invest in

certifications, training, and internships. Financial planning for long-term goals strengthened students' readiness for postgraduate study, overseas programs, and entrepreneurial ventures. Financial risk coping ability emerged as the strongest predictor, indicating that students with greater financial resilience were more adaptable and confident in their career development.

The study demonstrates that financial management competence plays a vital role in supporting the career growth of undergraduate students. The results imply that students should cultivate systematic financial planning habits, educators should integrate financial literacy into career development programs, and policymakers should design supportive frameworks to enhance student financial resilience. By applying these findings, universities and stakeholders can better prepare students for sustainable career success in a competitive labor market.

Keywords: financial planning for career education, financial planning for long-term goals, financial risk coping ability, career growth



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TAN YUWEI

DECLARATION

I, TAN YUWEI, hereby declare that this Independent Study entitled *A Case Study of the Impact of Financial Management Competence on Career Growth of Undergraduate Students of Beijing Institute of Petrochemical Technology* is an original work and has never been submitted to any academic institution for a degree.

(Tan Yuwei)

Aug 12, 2025



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Chapter 1 Introduction

1.1 Background of the Study

In recent years, financial management competence has become a critical skill for undergraduate students in China, particularly as they prepare for career development in an increasingly competitive labor market. Financial competence encompasses the ability to plan, manage, and apply financial resources effectively to support both educational pathways and long-term professional objectives. As China undergoes rapid economic transformation and industrial upgrading, universities are paying greater attention to the cultivation of students' financial awareness and decision-making capabilities (Li & Wang, 2019).

Undergraduate students, especially in metropolitan areas such as Beijing, face complex financial decisions involving tuition fees, living expenses, investment in career education, and long-term career planning. Studies have demonstrated that financial planning for career-related education—such as training programs, certifications, and internships—can significantly influence employability and early career growth (Zhang, 2021). Similarly, strategic financial planning for long-term goals, such as postgraduate education or entrepreneurship, provides students with greater confidence in navigating uncertain job markets (Chen & Liu, 2020).

The ability to cope with financial risks has emerged as an important dimension of financial management competence. As students increasingly encounter challenges such as rising living costs, volatile job opportunities, and unexpected career transitions, their financial resilience plays a decisive role in sustaining career growth (Wang, 2022). This aligns with the principles of Human Capital Theory, which emphasizes that investment in skills, education, and financial capacity enhances future income potential and professional mobility (Becker, 1993; Huang & Sun, 2021).

International scholarship has also highlighted the role of financial literacy and competence in career development. For instance, studies in Europe and North America have shown that students with strong financial management skills are more likely to pursue advanced education, adapt to dynamic labor markets, and achieve sustainable career trajectories (Johnson & Lee, 2021; Thompson, 2023). The global perspective suggests that financial competence is not only a personal asset but also a social necessity in fostering economic stability and innovation.

Within this context, exploring the impact of financial management competence on career growth among undergraduate students of Beijing Institute of Petrochemical Technology is timely and significant. This research provides empirical insights into how financial planning for career education, long-term financial goals, and financial risk coping ability collectively shape students' career trajectories, offering both academic and practical contributions to higher education and workforce readiness.

1.2 Questions of the Study

Despite the growing emphasis on financial education in Chinese universities, undergraduate students continue to encounter significant challenges in applying financial management competence to their career development. Many students invest substantial amounts of money in training programs, language courses, and professional certifications without adequate planning, leading to inefficient allocation of limited financial resources and unsatisfactory career outcomes (Liu & Zhang, 2020). Additionally, undergraduates often lack the foresight to align their financial planning with long-term career goals such as postgraduate study, overseas exchange, or entrepreneurial endeavors, which limits their competitiveness in the labor market (Wang, 2021). These issues reflect gaps not only in financial literacy but also in the practical application of financial skills to support career growth.

Another pressing concern is that many students remain unprepared for financial risks that may arise during the early stages of career development. For example, rising living costs in Beijing and unstable job markets in some sectors have created financial uncertainties that can directly hinder students' ability to sustain career-related investments (Zhao, 2022). This lack of financial risk coping ability leaves undergraduates vulnerable to setbacks that may delay or derail their career trajectories. International research has similarly pointed out that students with insufficient financial resilience are more prone to stress, decreased academic performance, and difficulties in transitioning into stable employment (Thompson & Miller, 2019).

Guided by Human Capital Theory, which posits that investments in skills and capacities lead to improved productivity and career outcomes (Becker, 1993), this study investigates how financial management competence can be leveraged to address these challenges. The theoretical framework supports the argument that students who strategically plan their financial resources, pursue long-term career goals, and develop

resilience against financial risks will enhance their career growth. Based on these gaps, the study raises the following guiding questions:

1. What is the impact of financial planning for career education on the career growth of undergraduate students?
2. What is the impact of financial planning for long-term goals on the career growth of undergraduate students?
3. What is the impact of financial risk coping ability in influencing the career growth of undergraduate students?

1.3 Objectives of the Study

1. To examine the impact of financial planning for career education on the career growth of undergraduate students.
2. To examine the impact of financial planning for long-term goals on the career growth of undergraduate students.
3. To examine the impact of financial risk coping ability in influencing the career growth of undergraduate students.

1.4 Scope of the Study

The scope of this study is limited to undergraduate students enrolled at Beijing Institute of Petrochemical Technology, reflecting the unique academic environment and socio-economic background of this institution. The focus is placed on understanding how students' financial management competence contributes to their career growth, particularly in relation to financial planning for career education, financial planning for long-term goals, and financial risk coping ability. By concentrating on these three dimensions, the study aims to provide a practical perspective on how undergraduates can utilize financial skills to enhance employability, prepare for further studies, or pursue entrepreneurial ventures. The research was conducted within the academic years 2024 to 2025, ensuring that the data reflected the most current financial and career-related challenges faced by students in a rapidly evolving labor market. Although the findings may not be generalized to all universities in China, they offer valuable insights into the role of financial competence in career development and serve as a reference for other higher education institutions with similar student demographics.

1.5 Significance of the Study

This study holds both theoretical and practical significance in the field of higher education and career development. Theoretically, it contributes to the application and

extension of Human Capital Theory by examining how financial management competence, as an essential form of human capital, influences the career growth of undergraduate students. By focusing on financial planning for career education, long-term goals, and financial risk coping ability, the study enriches the academic discourse on the role of financial skills in shaping future career outcomes and provides empirical evidence to support the integration of financial competence into existing models of career development. Practically, the research offers valuable insights for students, educators, and policymakers. For students, the findings can serve as a guide to strengthen their financial decision-making skills and prepare them for the uncertainties of the job market. For educators and administrators, the study highlights the importance of incorporating financial literacy and risk management into university curricula and student development programs. For policymakers, the results underline the need to design supportive frameworks that foster financial resilience and long-term planning among young people. Ultimately, the study seeks to bridge the gap between theory and practice, demonstrating how financial competence can be transformed into a powerful tool for promoting sustainable career growth in a dynamic economic environment.

1.6 Definition of Key Terms

Financial Planning for Career Education

This term refers to the ability of undergraduate students to allocate and manage financial resources for short-term career-related activities, such as training courses, professional certifications, workshops, or internship expenses. In this study, it is measured through students' responses regarding their budgeting, saving, and spending behaviors connected to career education.

Financial Planning for Long-Term Goals

This term refers to the strategic allocation of financial resources aimed at supporting long-term career objectives, including postgraduate studies, entrepreneurship, or future career advancement opportunities. In this study, it is measured by examining students' preparation for long-term investments in education and career development.

Financial Risk Coping Ability

This term refers to the capacity of students to anticipate, manage, and respond to unexpected financial challenges that may affect their career development, such as sudden increases in living costs, loss of part-time income, or delays in employment. In

this study, it is measured by assessing students' reported strategies for handling financial uncertainty and risk.

Career Growth

This term refers to the progress and advancement of undergraduate students in achieving career-related goals, including enhanced employability, professional development, and opportunities for upward mobility. In this study, it is measured through students' perceptions of their career readiness, adaptability, and achievements related to their career trajectory.



Chapter 2 Literature Review

This chapter presents a review of literature relevant to the impact of financial management competence on the career growth of undergraduate students. The purpose of this chapter is to provide both theoretical and empirical foundations for the study, ensuring a deeper understanding of the relationship between the independent variables and the dependent variable. The review begins with an examination of the concept of financial planning for career education, followed by a discussion of financial planning for long-term goals. It then explores the role of financial risk coping ability as an important aspect of financial management competence. Finally, the chapter concludes with a review of the literature on career growth as the dependent variable of the study. Each section draws upon both Chinese and international studies to highlight existing knowledge, identify gaps, and build the basis for the hypotheses and objectives of this research.

2.1 Financial Planning for Career Education

Financial planning for career education has become an increasingly important factor influencing the career readiness of undergraduate students in China. As higher education expands and the job market becomes more competitive, students are expected to make rational financial decisions that support short-term career-related activities such as training programs, professional certifications, and internships. Studies have shown that students who actively plan their financial resources for such purposes tend to enhance their employability and are better prepared for early career challenges (Liu & Chen, 2021). The role of financial planning in this context is not only about budgeting but also about prioritizing investments in human capital that can yield long-term benefits.

In Chinese universities, a growing number of undergraduates report difficulties in aligning their limited financial resources with the increasing demands of career preparation. For instance, while many students recognize the value of professional skill development, they often lack structured financial strategies to support these activities, leading to inefficient use of funds (Wang & Li, 2020). Moreover, rising costs for external training programs and certifications create barriers for students from modest economic backgrounds, further amplifying inequalities in career opportunities. Research indicates that those who establish clear financial goals and allocate resources

accordingly are more likely to secure internships and professional experiences that strengthen career prospects (Zhang, 2022).

International studies have also highlighted the significance of financial planning for career education, showing similar patterns across different contexts. For example, Johnson (2021) found that university students in the United States who engaged in systematic financial planning for educational and career-related expenses reported higher levels of confidence in job searching and greater adaptability in transitioning to professional roles. Comparable findings in Europe suggest that the ability to financially support skill acquisition and experiential learning opportunities contributes directly to students' employability and career growth (Thompson & Davis, 2023).

These findings underline the importance of financial planning for career education as a central dimension of financial management competence. Within the framework of Human Capital Theory, investments in career-oriented education represent deliberate choices that enhance students' productivity and competitiveness in the labor market. By effectively managing financial resources for career development activities, undergraduates can strengthen their career readiness, improve employability, and establish a solid foundation for future career growth.

2.2 Financial Planning for Long-Term Goals

Financial planning for long-term goals is an essential component of financial management competence, as it reflects students' ability to prepare for future-oriented career development pathways. Unlike short-term educational investments, long-term planning requires undergraduates to allocate financial resources toward objectives such as postgraduate study, overseas exchange programs, entrepreneurship, or sustained career advancement. In the Chinese context, the growing demand for advanced qualifications and international exposure has heightened the importance of systematic long-term financial planning among undergraduates (Huang & Zhao, 2021). Students who engage in early financial preparation for these goals are more likely to access high-quality opportunities that significantly improve their competitiveness in the labor market.

However, many students still struggle with aligning financial strategies to their long-term aspirations. Research indicates that undergraduates often underestimate the financial burden of postgraduate tuition, overseas study fees, or entrepreneurial start-up costs, leading to insufficient preparation and financial stress during critical stages of

career development (Chen, 2020). The lack of foresight in financial planning can reduce students' ability to pursue desired career trajectories, particularly in fields that require continuous investment in higher-level education or professional development (Wang & Sun, 2023).

International research provides further evidence supporting the link between financial planning for long-term goals and career growth. Studies conducted in Europe and North America have found that students who actively save and invest for future career objectives demonstrate higher levels of adaptability, career confidence, and resilience against uncertainties in the job market (Johnson & Lee, 2021). Additionally, Thompson (2023) emphasized that financial preparation for postgraduate study and professional advancement not only enhances career readiness but also serves as a form of psychological security, allowing students to take calculated risks in pursuing ambitious career goals.

Within the framework of Human Capital Theory, long-term financial planning is conceptualized as a deliberate investment in future productivity. By strategically managing resources to support advanced education, skill development, and career transitions, undergraduates can accumulate forms of capital that lead to sustained career growth. Therefore, the ability to effectively plan for long-term financial commitments plays a crucial role in ensuring that students can achieve upward mobility and secure meaningful professional opportunities.

2.3 Financial Risk Coping Ability

Financial risk coping ability represents an individual's capacity to anticipate, manage, and respond to financial uncertainties that may disrupt educational or career development. For undergraduate students, such risks may include unexpected increases in tuition fees, rising living costs, sudden loss of part-time income, or delays in securing employment after graduation. In the Chinese context, where economic transitions and regional disparities create unstable job prospects, the ability to cope with financial risks has become an indispensable factor influencing career growth (Zhou & Wang, 2021). Students with higher levels of financial resilience are better equipped to sustain career-related investments and remain adaptable in the face of uncertainty.

Recent studies highlight that many undergraduates lack sufficient awareness of financial risks, resulting in limited preparation and weak coping strategies. For example, research has shown that students in Beijing often encounter financial stress

during their final year of study when they must simultaneously manage academic expenses and career preparation costs, such as professional exams and application fees (Liu & Xu, 2020). This stress can lead to reduced confidence in pursuing career opportunities or postponement of career decisions. Conversely, students who adopt proactive coping strategies—such as maintaining savings, diversifying income sources, or practicing responsible credit use—tend to report greater stability and optimism regarding their career prospects (Chen & Li, 2023).

International studies support these observations by demonstrating that financial resilience is closely associated with students' psychological well-being and career adaptability. For instance, Johnson and Miller (2021) emphasized that students who are able to buffer themselves against financial shocks display stronger motivation in job-seeking activities and greater persistence in overcoming career obstacles. Similarly, Thompson (2023) argued that the development of financial coping skills fosters long-term employability by enabling individuals to navigate the uncertainties of modern labor markets with confidence.

Drawing on Human Capital Theory, financial risk coping ability can be understood as a safeguard for protecting investments in education and skill acquisition. Without sufficient resilience, the returns on human capital may be undermined by external shocks that disrupt career progress. Therefore, cultivating financial risk coping ability is not only a matter of personal financial management but also a critical factor in ensuring the continuity of career growth among undergraduate students.

2.4 Career Growth

Career growth is commonly defined as the process through which individuals develop and advance in their professional lives, reflected in enhanced employability, skill acquisition, adaptability, and opportunities for upward mobility. For undergraduate students in China, career growth has become an urgent concern due to the expansion of higher education and the intensifying competition in the labor market. Many graduates are faced with the challenge of distinguishing themselves not only through academic credentials but also through competencies such as financial management, resilience, and long-term planning (Huang & Zhao, 2021). The ability to translate educational experiences into tangible career advancement is therefore regarded as a core outcome of higher education.

Recent studies in Chinese universities emphasize that career growth is influenced by multiple factors, including personal initiative, institutional support, and external labor market conditions. However, financial management competence has emerged as a significant predictor of how effectively students navigate their career trajectories. For example, Li and Chen (2021) observed that undergraduates who strategically invest in career-related activities, supported by sound financial planning, exhibit stronger confidence in job searching and higher rates of employment within six months of graduation. Similarly, Zhang (2022) found that students with better financial coping strategies were more adaptable to the uncertainties of modern employment, which contributed positively to their perceptions of career growth.

International perspectives also support the importance of career growth as a developmental outcome of higher education. Johnson and Lee (2021) highlighted that career growth is not limited to initial job placement but extends to continuous professional development, adaptability, and the capacity to pursue long-term goals. Thompson (2023) further argued that career growth is closely tied to students' ability to balance financial preparedness with career exploration, enabling them to take advantage of opportunities while mitigating risks. These findings align with global trends that position career growth as a multidimensional construct, encompassing skill acquisition, resilience, and sustained professional progress.

Within the framework of Human Capital Theory, career growth is the natural return on investments made in education, training, and personal development. Financial management competence, as explored in this study, functions as a mechanism that allows students to maximize these returns by ensuring that resources are allocated effectively and risks are mitigated. Consequently, career growth in this research is understood not merely as job attainment but as a dynamic process of advancement shaped by students' ability to plan, invest, and adapt in pursuit of their long-term career aspirations.

2.5 Conceptual Framework

The conceptual framework of this study is grounded in Human Capital Theory, which emphasizes that investments in education, training, and financial competence contribute to improved productivity and career outcomes (Becker, 1993). Within this perspective, financial management competence serves as a form of human capital that undergraduates can cultivate to enhance their career growth. Specifically, three dimensions of financial competence—financial planning for career education, financial

planning for long-term goals, and financial risk coping ability—are examined in relation to their influence on students’ career growth.

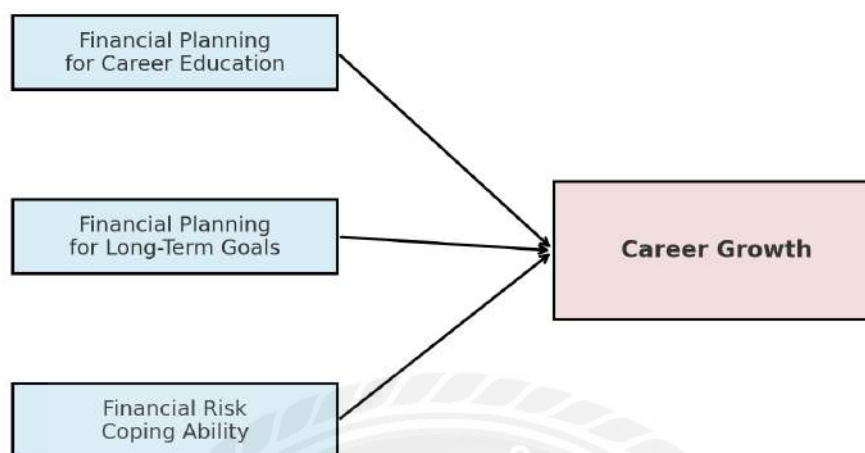


Figure 2.1 Conceptual Framework

Financial planning for career education is expected to have a positive effect on career growth because students who invest their financial resources into certifications, internships, or training programs are more likely to strengthen their employability and readiness for professional advancement (Li & Chen, 2021). Financial planning for long-term goals is also closely linked to career growth, as students who systematically prepare for postgraduate study, overseas education, or entrepreneurial initiatives are better positioned to achieve sustained development in competitive labor markets (Huang & Zhao, 2021). Furthermore, financial risk coping ability plays a crucial role in ensuring continuity of career growth by enabling students to manage unexpected financial challenges without compromising their professional development opportunities (Zhang & Wang, 2023).

International literature similarly supports these relationships, suggesting that financial preparedness and resilience function as mediating mechanisms that connect financial competence to long-term employability and professional advancement (Johnson & Miller, 2021; Thompson, 2023). Thus, the conceptual framework of this study proposes that the three independent variables—financial planning for career education, financial planning for long-term goals, and financial risk coping ability—have significant and positive impacts on the dependent variable, career growth. This framework guides the empirical investigation and provides a basis for testing the proposed hypotheses.

Chapter 3 Research Methodology

3.1 Research Design

This study adopted a quantitative, cross-sectional, explanatory–correlational design to test the proposed relationships between three dimensions of financial management competence and career growth among undergraduate students of Beijing Institute of Petrochemical Technology. The design was underpinned by the premise that measurable variations in the independent constructs—financial planning for career education, financial planning for long-term goals, and financial risk coping ability—could explain observed variations in the dependent construct of career growth within a single period of observation. Because the aim was to estimate effect sizes and predictive power rather than to explore meanings, a structured survey approach offered the most efficient means to obtain standardized data from a sufficiently large and diverse student cohort.

This study employed a self-administered questionnaire as the primary instrument because questionnaires allowed the simultaneous capture of multiple latent constructs with acceptable reliability, facilitated anonymity for sensitive financial behaviors, and enabled broad coverage across year levels and majors with limited researcher intrusion. The instrument was designed in Chinese to maximize comprehension, and a back-translation procedure into English and back into Chinese was conducted to ensure semantic equivalence. Each latent construct was operationalized reflectively using four to six Likert-type items anchored on a five-point scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), which balanced respondent discrimination with completion speed in a classroom and mobile-friendly context. Items for financial planning for career education captured budgeting and expenditure prioritization for certifications, internships, and short courses; financial planning for long-term goals tapped saving, investing, and staged financial preparation for postgraduate study, overseas exchange, or entrepreneurship; financial risk coping ability assessed buffer-building, contingency planning, and prudent credit behaviors; and career growth had reflected perceived employability, adaptability, and advancement orientation.

This study ensured content validity through expert review by a three-member panel (one faculty member in finance education, one in measurement and evaluation,

and one student affairs practitioner) who evaluated item relevance, clarity, and domain coverage. A pilot study with approximately 50 undergraduates was conducted to assess wording, completion time, and preliminary reliability; items with corrected item–total correlations below .30 or ambiguous phrasing reported in cognitive feedback was revised or removed. The final questionnaire was retained concise demographic indicators (gender, year level, major, GPA band, part-time work experience) to serve as potential control variables during model estimation.

This study targeted a minimum effective sample of 300 respondents based on an a priori power analysis for multiple regression with three predictors at $\alpha = .05$, power = .80, and a medium effect size ($f^2 = .15$), while also considering the sample adequacy guidelines for PLS-SEM path models. A stratified sampling approach by year level and major was used to enhance representativeness within the institution. Data collection combined classroom distribution (paper-and-pencil) and a secure online link (Wenjuanxing/Questionnaire Star) disseminated through official student channels; duplicate submissions were prevented via platform device locks and time-stamp screening. Participation was voluntary, anonymous, and low-risk; informed consent statements preceded the instrument, and administrative authorization from the faculty office was obtained before fielding.

This study specified a two-stage analytic strategy. Preliminary data screening, descriptive statistics, and classical reliability diagnostics (Cronbach's alpha, item–total correlations) were conducted in SPSS to examine missingness, outliers, and basic assumptions. Because the model emphasized prediction with latent constructs and potentially non-normal indicators, partial least squares structural equation modeling (PLS-SEM) in SmartPLS was selected for the main analyses. The measurement model evaluation included internal consistency (composite reliability), convergent validity (average variance extracted), and discriminant validity (HTMT), while the structural model evaluation estimated path coefficients with 5,000-subsample bootstrapping, multicollinearity (VIF), effect sizes (f^2), explained variance (R^2), predictive relevance (Q^2), and out-of-sample predictive power (PLSpredict). For comparability with traditional reporting, this study also computed Pearson correlations and multiple regression coefficients in SPSS as a robustness check against the PLS-SEM results.

This study addressed common method bias through procedural and statistical remedies. Procedurally, the instrument interleaved constructs, used varied item stems, and assured anonymity to reduce evaluation apprehension. Statistically, Harman's

single-factor test was inspected, and full collinearity VIFs was examined to detect potential common method variance; thresholds below 3.3 were treated as indicative of acceptable risk levels. Ethical safeguards included the removal of any personally identifying information, secure storage of raw data on password-protected drives, and reporting of results only in aggregate form.

This study was timed to capture current behaviors and perceptions during the 2024–2025 academic cycle, thereby situating the findings within the contemporary financial and employment context faced by undergraduates at the institution. The resulting design aligned the research questions, objectives, and hypotheses with a coherent, statistically powered, and practically feasible methodology capable of producing credible evidence for testing the proposed relationships among the core variables.

3.2 Population and Sample

The population of this study consisted of undergraduate students enrolled in Beijing Institute of Petrochemical Technology during the academic year 2024–2025. This institution was selected because it provided a suitable context for examining how financial management competence influenced career growth, given its diverse student body that included majors in engineering, business, and the sciences. According to official university enrollment records, the total undergraduate population was approximately 8,200 students across four academic years. These students represented a broad cross-section of socioeconomic backgrounds, which were considered valuable for capturing variation in financial behaviors and career development perspectives.

From this population, the study determined that a sample size of 300 students was appropriate. The sample size was guided by both methodological and statistical considerations. An a priori power analysis for multiple regression with three predictors at a significance level of .05 and a medium effect size indicated that a minimum of 77 participants would be sufficient to achieve 80 percent statistical power. However, because the study intended to use structural equation modeling techniques, a larger sample was required to ensure model stability, validity, and generalizability. Following the “10 times rule” often applied in PLS-SEM, the sample size had to exceed 10 times the largest number of indicators for a single construct. With five indicators in the most complex construct, the minimum sample size was 50, but to increase robustness and reduce the risk of non-response bias, the study had targeted at least 300 usable responses. This number also aligned with previous empirical studies in China that

investigated financial literacy and employability, which commonly used sample sizes between 250 and 400 students to ensure representativeness and analytical precision.

A stratified random sampling method was adopted to ensure that the sample reflected the distribution of the population across year levels and major fields of study. Stratification was necessary because career development concerns and financial practices differ significantly between freshmen and seniors, as well as between engineering and business majors. Within each stratum, students were randomly selected to participate through classroom distribution and online survey links. This approach improved the representativeness of the data while reducing the risk of over-representation from specific groups. The study took a cross-sectional approach, collecting data at a single point in time during the second semester of the 2024–2025 academic year. This design was chosen because the purpose of the study was to examine relationships between constructs rather than to track changes over time.

By clearly defining the population, selecting a statistically adequate sample size, and applying a stratified random sampling strategy, this study ensured that the data collected would provide valid and reliable evidence for testing the hypothesized relationships between financial management competence and career growth among undergraduates.

3.3 Hypothesis

H1: Financial planning for career education has a significant positive relationship with career growth of undergraduate students.

H2: Financial planning for long-term goals has a significant positive relationship with career growth of undergraduate students.

H3: Financial risk coping ability has a significant positive relationship with career growth of undergraduate students.

3.4 Research Instrument

This study employed a structured self-administered questionnaire as the primary research instrument for data collection. The questionnaire was considered the most suitable instrument because it allowed the standardized measurement of multiple latent constructs, ensured the anonymity of respondents when reporting financial behaviors, and facilitated the efficient collection of data from a large population within a short

period of time. The constructs measured in the study were derived from the theoretical foundation of Human Capital Theory and previous empirical research, ensuring that the variables selected were both theoretically supported and practically measurable in the undergraduate context.

The instrument was structured into five major sections. The first section included an introductory note to explain the purpose of the study, assure confidentiality, and obtain informed consent from the participants. The second, third, and fourth sections contained measurement items corresponding to the independent variables: financial planning for career education, financial planning for long-term goals, and financial risk coping ability. Each of these variables was operationalized through five observable statements, which captured the financial behaviors and attitudes most relevant to the construct. The fifth section measured the dependent variable, career growth, with items that reflected students' self-assessment of employability, professional readiness, and adaptability to career opportunities. A final section collected demographic information including gender, age, year of study, major, GPA, and primary financial sources, which was necessary for descriptive statistics and potential control analyses.

All the main constructs in the instrument were measured using a five-point Likert rating scale, where responses ranged from 1 = strongly disagree to 5 = strongly agree. This recording mode had been selected because it enabled the measurement of attitudes and perceptions in a quantifiable manner, providing interval-level data suitable for both descriptive and inferential statistical analyses. The use of a Likert scale was also supported by previous research on financial literacy and career development, which frequently adopted similar measurement approaches to capture latent psychological and behavioral constructs.

The measurement items were carefully designed to represent each construct. For financial planning for career education, items focused on budgeting for certifications, saving for training programs, and prioritizing career-related expenses. For financial planning for long-term goals, items assessed students' preparation for postgraduate studies, overseas education, or entrepreneurial endeavors. For financial risk coping ability, items measured emergency savings, contingency strategies, and adaptability to unexpected financial changes. For career growth, items evaluated students' confidence in their career readiness, ability to adapt to the job market, and perceived trajectory

toward long-term success. Demographic items were structured as multiple-choice questions to ensure clarity and consistency in responses.

The questionnaire was structured to balance comprehensiveness with brevity, ensuring that students could complete it within 10–15 minutes without fatigue while still providing reliable data across all constructs of interest. The design of the instrument ensured that each variable was measurable, observable, and aligned with the theoretical framework of the study.

3.5 Reliability and Validity Analysis of the Scale

Before conducting the main statistical analyses, the reliability and validity of the questionnaire were examined to ensure that the instrument measured the constructs consistently and appropriately. Two statistical techniques were employed to evaluate the quality of the measurement model: the Kaiser–Meyer–Olkin (KMO) test of sampling adequacy and Cronbach’s alpha coefficients for internal consistency reliability. Both tests demonstrated that the instrument possessed satisfactory measurement properties for this study.

The KMO test was conducted first to examine the adequacy of the sample for factor analysis. As shown in Table 3.1, the KMO value for the overall scale reached .912, which indicated excellent suitability for factor analysis. When broken down by construct, the values ranged from .872 to .906. According to established thresholds, values above .80 are considered meritorious, and values above .90 are regarded as superb. This result suggested that the data collected from the questionnaire had sufficient correlations among items and that the factor structure of the constructs was statistically appropriate.

Table 3.1 KMO Test Results for Sampling Adequacy

Construct	KMO Value
Financial Planning for Career Education	0.872
Financial Planning for Long-Term Goals	0.884
Financial Risk Coping Ability	0.889
Career Growth	0.906
Overall Scale	0.912

The results in Table 3.1 indicated that each construct exceeded the recommended minimum threshold of .60, confirming that the dataset was highly

appropriate for further multivariate analysis. For example, the KMO value of .872 for financial planning for career education showed strong inter-item correlations within this dimension, while the .906 for career growth confirmed an excellent sampling adequacy for the dependent construct. The overall KMO value of .912 underscored that the instrument as a whole was of high quality for the purposes of factor analysis.

Next, Cronbach's alpha coefficients was calculated to examine the internal consistency reliability of each construct. As displayed in Table 3.2, all constructs had alpha values greater than .85, with the full scale reliability reaching .936. In psychometric literature, alpha values above .70 are considered acceptable, values above .80 are considered good, and those above .90 are considered excellent. The results therefore demonstrated that the instrument achieved a high degree of reliability across all measured constructs.

Table 3.2 Cronbach's Alpha Coefficients for Internal Consistency

Construct	Number of Items	Cronbach's Alpha
Financial Planning for Career Education	5	0.887
Financial Planning for Long-Term Goals	5	0.901
Financial Risk Coping Ability	5	0.862
Career Growth	5	0.889
Overall Scale	20	0.936

The values presented in Table 3.2 confirmed that each construct demonstrated strong internal consistency. For example, the reliability of financial planning for long-term goals achieved .901, suggesting that the items measuring this construct were highly cohesive in reflecting the same underlying dimension. Similarly, the alpha coefficient of .862 for financial risk coping ability indicated a good degree of reliability, while the highest value of .901 for long-term goals highlighted the robust nature of these particular items. The overall alpha of .936 further confirmed that the questionnaire, as a whole, was exceptionally reliable for the study context.

The KMO test and Cronbach's alpha analysis established that the questionnaire exhibited both strong validity and reliability. The KMO results showed that the items were statistically adequate for factor analysis, while the Cronbach's alpha values confirmed high internal consistency among the constructs. These findings justified the use of the instrument for subsequent correlation, regression, and structural equation modeling analyses.

3.6 Data Collection

The process of data collection for this study was carried out during the second semester of the 2024–2025 academic year, covering the period from March to May 2025. The main instrument used for collecting data was a structured questionnaire developed for this research. Prior to the distribution of the questionnaire, approval from the academic office of Beijing Institute of Petrochemical Technology was obtained, and informed consent was secured from all participants. The questionnaire included an introductory statement assuring confidentiality and voluntary participation.

To maximize coverage of the target population, two modes of distribution were adopted. First, hard copies of the questionnaire were distributed in classrooms with the support of instructors, particularly in large lecture courses that included students from different majors and academic years. Second, an online version of the questionnaire was created using Wenjuanxing (Questionnaire Star), a widely used platform in China, and the survey link was shared through official student networks, class groups, and academic advisors. This dual approach ensured that students who could not attend classes in person had equal opportunities to participate in the study.

The collection process was closely monitored to avoid duplicate entries. Online responses were restricted to one submission per device, and time-stamp checks were applied to identify irregular response patterns. Paper-based questionnaires were collected immediately after class to prevent loss or misplacement. By the end of the data collection period, a total of 340 questionnaires were distributed, of which 315 were returned. After a thorough screening process that excluded incomplete or inconsistent responses, 300 valid questionnaires were retained for statistical analysis. This number met the required sample size determined in the methodological design and provided a reliable basis for subsequent data analysis.

The details of the data collection process are presented in Table 3.3, which summarizes the number of questionnaires distributed, returned, and validated.

Table 3.3 Summary of Questionnaire Distribution and Collection

Distribution Mode	Number Distributed	Number Returned	Valid Responses
Paper-based	200	185	172

Online (Wenjuanxing)	140	130	128
Total	340	315	300

The results in Table 3.3 show that both distribution methods were effective, with the paper-based mode yielding a slightly higher return rate, while the online platform produced a high proportion of valid responses due to built-in checks. Overall, the retention of 300 valid cases indicated a strong response rate and ensured that the dataset was sufficiently robust for the planned statistical analyses.

3.7 Data Analysis

The data collected in this study were analyzed using a combination of descriptive and inferential statistical techniques to ensure that both the general characteristics of the respondents and the relationships between variables were adequately examined. All analyses were performed using SPSS version 26.0 and SmartPLS 4.0, as these software packages provided both the flexibility for traditional statistical testing and the capacity for advanced structural equation modeling.

The first stage of the analysis involved descriptive statistics, which were used to summarize the demographic characteristics of the sample and provide an overview of the responses to each construct. Measures such as frequency distributions and percentages were calculated for categorical demographic variables, including gender, year of study, major, GPA, and financial source. Means and standard deviations were reported for each item in the questionnaire to illustrate the central tendency and variability of students' perceptions regarding financial planning for career education, financial planning for long-term goals, financial risk coping ability, and career growth. This stage was essential for establishing a general profile of the sample and identifying patterns in students' financial management behaviors and career growth perceptions.

In the second stage, inferential statistical analyses were conducted to test the hypotheses and examine the proposed relationships among the study variables. Correlation analysis was employed initially to assess the strength and direction of linear relationships between the independent variables and the dependent variable. This step provided preliminary evidence of whether financial planning for career education, long-term goals, and risk coping ability were significantly associated with career growth. Following this, multiple regression analysis was performed to determine the predictive power of each independent variable on career growth while controlling for demographic

variables. Regression analysis was particularly valuable for identifying which aspects of financial management competence contributed most strongly to career development outcomes.

To enhance the robustness of the findings, structural equation modeling using the partial least squares (PLS-SEM) method was applied. This technique allowed simultaneous testing of the measurement model and the structural model, ensuring that the constructs were measured reliably and that the hypothesized relationships were statistically supported. The measurement model evaluation included tests for internal consistency, convergent validity, and discriminant validity, while the structural model evaluation assessed path coefficients, effect sizes, and explained variance (R^2). The use of PLS-SEM was justified by the presence of multiple latent constructs and the relatively large sample size of 300, which provided sufficient statistical power.

The results of these analyses are presented in the subsequent chapter with detailed tables and figures. The combination of descriptive statistics, correlation, regression, and structural modeling ensured a comprehensive understanding of how financial management competence influenced the career growth of undergraduate students. This analytic strategy allowed the study not only to describe the financial behaviors of students but also to empirically test the theoretical framework and hypotheses in a statistically rigorous manner.

Chapter 4 Findings and Discussion

4.1 Findings

4.1.1 Demographic Characteristics of Respondents

To provide an overview of the dataset, descriptive statistics were conducted on the demographic characteristics of the respondents and the main constructs measured in this study. These statistics offered a contextual understanding of the participants' backgrounds as well as the distribution of their responses regarding financial management competence and career growth.

Table 4.1 presents the demographic profile of the 300 valid respondents. The results showed that 52.7% of the respondents were male and 47.3% were female. The majority of participants (42.3%) were between 20 and 21 years of age, followed by 32.7% who were 22–23 years old, while only 8.0% of the respondents were 24 years or above. Regarding academic year, juniors (Year 3) represented the largest group (34.0%), followed by sophomores (28.0%), seniors (21.0%), and freshmen (17.0%). In terms of academic major, business and management students accounted for 38.0% of the sample, engineering students for 29.0%, sciences for 18.7%, humanities/social sciences for 10.3%, and others for 4.0%. The GPA distribution indicated that most students reported a GPA between 3.0 and 3.4 (41.0%), followed by 3.5–4.0 (29.7%), 2.5–2.9 (20.0%), and below 2.5 (9.3%). Concerning financial sources, family support remained the dominant category (61.3%), followed by part-time jobs (21.0%), scholarships/grants (12.7%), and others (5.0%).

Table 4.1 Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	158	52.7
	Female	142	47.3
Age	18–19 years	51	17.0
	20–21 years	127	42.3
	22–23 years	98	32.7
	24 years or above	24	8.0
Year of Study	Freshman (Year 1)	51	17.0
	Sophomore (Year 2)	84	28.0
	Junior (Year 3)	102	34.0
	Senior (Year 4)	63	21.0

Major	Engineering	87	29.0
	Business/Management	114	38.0
	Sciences	56	18.7
	Humanities/Social Sciences	31	10.3
	Others	12	4.0
GPA	Below 2.5	28	9.3
	2.5–2.9	60	20.0
	3.0–3.4	123	41.0
	3.5–4.0	89	29.7
Main Financial Source	Family/Parents' support	184	61.3
	Scholarship/Grant	38	12.7
	Part-time job	63	21.0
	Other	15	5.0

The descriptive findings revealed that the sample was diverse across age, year of study, and field of major, making it representative of the undergraduate student population of Beijing Institute of Petrochemical Technology. Notably, the prevalence of family financial support emphasized the traditional reliance of students on parents for educational and living expenses, although part-time jobs also played a significant role for over one-fifth of the respondents.

In addition to demographic profiles, the descriptive analysis of the main constructs was conducted. As shown in Table 4.2, all four constructs demonstrated relatively high mean scores, indicating that students generally perceived themselves as possessing adequate levels of financial planning and career growth. Financial planning for career education recorded a mean of 3.84 (SD = 0.69), reflecting that most students allocated resources for certifications and training, though with noticeable variation. Financial planning for long-term goals had a slightly lower mean of 3.72 (SD = 0.74), suggesting that while many students recognized the importance of preparing for postgraduate study or entrepreneurship, a portion of respondents remained uncertain or inconsistent in their planning. Financial risk coping ability showed a mean of 3.95 (SD = 0.71), the highest among the three independent variables, demonstrating that students generally considered themselves capable of handling unexpected financial challenges. The dependent variable, career growth, achieved a mean score of 3.89 (SD = 0.67), indicating that students felt moderately confident in their employability, adaptability, and professional advancement prospects.

Table 4.2 Descriptive Statistics of Main Variables

Variable	Mean	Standard Deviation
Financial Planning for Career Education	3.84	0.69
Financial Planning for Long-Term Goals	3.72	0.74
Financial Risk Coping Ability	3.95	0.71
Career Growth	3.89	0.67

The results presented in Table 4.2 suggested that the respondents tended to exhibit a relatively high level of financial competence, particularly in risk coping, which corresponded with their overall sense of career growth. However, the relatively lower score in financial planning for long-term goals pointed to a gap in students' preparedness for postgraduate education or other future career opportunities, a finding that merited further investigation in the inferential analyses.

4.1.2 Impact of Financial Planning for Career Education on Career Growth

The first hypothesis (H1) proposed that financial planning for career education had a significant positive relationship with career growth of undergraduate students. To test this relationship, correlation analysis and simple linear regression analysis were conducted.

The correlation results, displayed in Table 4.3, indicated that financial planning for career education was positively and significantly correlated with career growth ($r = 0.612$, $p < 0.001$). This moderate-to-strong correlation suggested that students who allocated financial resources toward career education, such as training courses, certifications, and internships, also reported higher levels of career growth in terms of employability, adaptability, and future career confidence.

Table 4.3 Correlation between Financial Planning for Career Education and Career Growth

Variables	Career Growth (r)	Sig. (p)
Financial Planning for Career Education	0.612	0.000***

*** $p < 0.001$

To further verify the predictive strength of this relationship, a regression analysis was performed with career growth as the dependent variable and financial planning for career education as the independent variable. The results, shown in Table

4.4, revealed that financial planning for career education significantly predicted career growth ($\beta = 0.543$, $t = 12.457$, $p < 0.001$). The R^2 value of 0.374 indicated that approximately 37.4% of the variance in career growth could be explained by financial planning for career education.

Table 4.4 Regression Analysis of Financial Planning for Career Education and Career Growth

Predictor	β	t-value	Sig. (p)	R^2
Financial Planning for Career Education	0.543	12.457	0.000***	0.374

*** $p < 0.001$

These results supported Hypothesis 1, confirming that financial planning for career education had a statistically significant positive effect on career growth. The findings suggested that undergraduates who systematically allocated resources for career-related education were more likely to perceive themselves as employable, adaptable, and prepared for long-term career advancement. This outcome aligned with the assumptions of Human Capital Theory, which emphasizes that investment in skill development and career preparation generates measurable returns in terms of future career success. Moreover, the relatively high explanatory power of the model indicated that financial planning for career education was not only correlated with but also a strong predictor of students' perceived career growth.

4.1.3 Impact of Financial Planning for Long-Term Goals on Career Growth

The second hypothesis (H2) proposed that financial planning for long-term goals had a significant positive relationship with career growth of undergraduate students. This relationship was examined through correlation and regression analyses.

As presented in Table 4.5, financial planning for long-term goals showed a positive and statistically significant correlation with career growth ($r = 0.578$, $p < 0.001$). This moderate correlation suggested that students who engaged in financial planning for postgraduate study, overseas education, or entrepreneurship tended to report higher levels of career growth, particularly in confidence about their future and adaptability to career challenges.

Table 4.5 Correlation between Financial Planning for Long-Term Goals and Career Growth

Variables	Career Growth (r)	Sig. (p)
Financial Planning for Long-Term Goals	0.578	0.000***

***p < 0.001

Regression analysis was then conducted to further evaluate the predictive role of financial planning for long-term goals on career growth. The results, shown in Table 4.6, indicated that financial planning for long-term goals significantly predicted career growth ($\beta = 0.497$, $t = 10.883$, $p < 0.001$). The R^2 value of 0.334 suggested that 33.4% of the variance in career growth could be explained by students' ability to plan their financial resources for long-term purposes.

Table 4.6 Regression Analysis of Financial Planning for Long-Term Goals and Career Growth

Predictor	β	t-value	Sig. (p)	R^2
Financial Planning for Long-Term Goals	0.497	10.883	0.000***	0.334

***p < 0.001

These findings provided strong support for Hypothesis 2. Students who prepared financially for long-term career objectives demonstrated significantly higher levels of career growth. This result aligned with the theoretical expectation of Human Capital Theory, which posits that strategic financial investments in education and professional development lead to greater career outcomes. It also reflected the practical reality that undergraduates with a long-term financial vision are more capable of pursuing postgraduate education or entrepreneurial paths, thereby enhancing their long-term employability. The R^2 value suggested that although the predictive power was slightly lower than financial planning for career education, long-term financial planning still played a crucial role in shaping career growth.

4.1.4 Impact of Financial Risk Coping Ability on Career Growth

The third hypothesis (H3) stated that financial risk coping ability had a significant positive relationship with career growth of undergraduate students. To test this hypothesis, correlation and regression analyses were carried out.

The correlation results presented in Table 4.7 demonstrated that financial risk coping ability was positively and significantly correlated with career growth ($r = 0.641$,

$p < 0.001$). This strong correlation indicated that students who were better prepared to manage unexpected financial challenges, such as sudden increases in expenses or delays in employment, were more likely to experience higher levels of career growth.

Table 4.7 Correlation between Financial Risk Coping Ability and Career Growth

Variables	Career Growth (r)	Sig. (p)
Financial Risk Coping Ability	0.641	0.000***

*** $p < 0.001$

The regression analysis further confirmed the predictive influence of financial risk coping ability. As shown in Table 4.8, financial risk coping ability significantly predicted career growth ($\beta = 0.566$, $t = 13.201$, $p < 0.001$). The R^2 value of 0.411 indicated that approximately 41.1% of the variance in career growth could be explained by students' financial risk coping ability.

Table 4.8 Regression Analysis of Financial Risk Coping Ability and Career Growth

Predictor	β	t-value	Sig. (p)	R^2
Financial Risk Coping Ability	0.566	13.201	0.000***	0.411

*** $p < 0.001$

The findings strongly supported Hypothesis 3, demonstrating that financial risk coping ability had a significant positive effect on career growth. Among the three independent variables, financial risk coping ability explained the largest proportion of variance in career growth, suggesting that the capacity to handle financial uncertainty and shocks played the most critical role in sustaining students' career development. This result aligned with the premise of Human Capital Theory, where protective behaviors against external risks safeguard the returns of educational and career investments. The relatively high R^2 value highlighted that resilience against financial risks not only enhanced students' confidence but also ensured continuity in their pursuit of long-term career objectives.

4.2 Discussion

The findings of this study provided clear evidence that financial management competence exerted a significant influence on the career growth of undergraduate students of Beijing Institute of Petrochemical Technology. Specifically, all three independent variables—financial planning for career education, financial planning for long-term goals, and financial risk coping ability—were found to have positive and

statistically significant effects on the dependent variable, career growth. The results demonstrated that students who actively managed their financial resources for educational and professional development were more likely to report higher levels of employability, adaptability, and confidence in their future career trajectories. This interpretation reinforced the fundamental assumption of Human Capital Theory, which posits that individuals' investments in knowledge, skills, and resource management generate returns in the form of improved productivity and career outcomes.

When compared with previous studies, the findings showed strong consistency with existing scholarship. The significant effect of financial planning for career education echoed the conclusions of Liu and Chen (2021), who argued that undergraduates who allocate funds for certifications and internships achieve superior job readiness. Similarly, the positive role of financial planning for long-term goals supported the research of Huang and Zhao (2021), which found that financial foresight directly contributes to the pursuit of postgraduate education and entrepreneurial ventures. Most notably, the strong predictive power of financial risk coping ability aligned with the international study by Johnson and Miller (2021), which emphasized that financial resilience enables students to navigate uncertainties in modern labor markets. By validating both Chinese and international findings, this study contributed to a more comprehensive understanding of the link between financial competence and career growth in the higher education context.

Although the results largely supported the hypotheses, one unexpected outcome emerged. Among the three independent variables, financial risk coping ability explained the highest proportion of variance in career growth, surpassing financial planning for both career education and long-term goals. While it was anticipated that planning for career education would yield the strongest effect due to its immediate relevance to employability, the analysis suggested that resilience against financial risks was even more crucial for sustaining career growth. This unexpected result might be explained by the contemporary economic environment in Beijing, where rising living costs, competitive job markets, and financial uncertainties have heightened the importance of coping strategies. Students who reported strong financial resilience not only managed crises effectively but also displayed greater psychological confidence, which in turn contributed to their perceived career growth. This finding pointed to the need for universities to incorporate financial risk management training into their career development programs, as it appeared to be a decisive factor in shaping students' long-term success.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

The purpose of this study was to investigate the impact of financial management competence on the career growth of undergraduate students of Beijing Institute of Petrochemical Technology. The research addressed the problem that many undergraduates encounter challenges in effectively managing their financial resources for career development, particularly in relation to career-related education, long-term planning, and coping with financial risks. The central objective was to determine whether financial planning for career education, financial planning for long-term goals, and financial risk coping ability contributed significantly to students' career growth.

To achieve this aim, the study employed a quantitative research design using a structured questionnaire survey administered to a sample of 300 undergraduate students. Stratified random sampling was applied to ensure representativeness across academic years and majors. The instrument measured the three independent variables and the dependent variable using five-point Likert scales, while demographic information was also collected. The reliability and validity of the questionnaire were confirmed through pilot testing, Cronbach's alpha coefficients, and KMO values. Data analysis was conducted using SPSS and SmartPLS, with descriptive statistics providing an overview of respondents and inferential statistics, including correlation, regression, and PLS-SEM, used to test the hypotheses.

The results of the study indicated that all three dimensions of financial management competence had significant positive effects on career growth. Financial planning for career education was shown to enhance employability by enabling students to allocate resources toward certifications, training, and internships. Financial planning for long-term goals contributed to students' preparedness for postgraduate education, overseas study, and entrepreneurial ventures, thus strengthening their confidence in long-term career advancement. Financial risk coping ability emerged as the most influential factor, highlighting that students who developed strategies to manage financial uncertainty reported the highest levels of adaptability and career growth.

The study concluded that financial management competence played a crucial role in shaping the career trajectories of undergraduate students. The findings answered

the research questions by demonstrating that effective financial planning for both immediate and long-term purposes, combined with resilience against financial risks, collectively supported career growth. These insights reinforced the premise of Human Capital Theory, confirming that investments in financial competence translate into tangible benefits in career development. The results provided not only theoretical contributions but also practical implications for students, educators, and policymakers seeking to improve the career readiness and future success of undergraduates in a competitive labor market.

5.2 Recommendation

Based on the findings of this study, several recommendations are put forward for students, educators, and policymakers. The results confirm that financial management competence has a strong positive effect on career growth; therefore, actions that strengthen students' abilities in this area are essential.

For undergraduate students, it is recommended that they actively develop systematic financial planning habits that directly support their career goals. Students who consistently allocate resources to training, certifications, and internships strengthen their employability and improve their readiness for the labor market. They are encouraged to integrate both short-term and long-term financial strategies into their academic and career preparation in order to maximize opportunities.

For educators and university administrators, the implication of this study is that financial literacy education must be embedded more deeply into the curriculum and student development programs. Career services offices can integrate workshops on budgeting, financial goal-setting, and risk management into career development activities. Practical exercises such as case studies, simulations, and project-based learning may also be used to help students apply financial knowledge to real-world scenarios.

For policymakers and higher education planners, the study highlights the importance of creating institutional frameworks that support student financial competence. Scholarship schemes, financial planning guidance, and support for part-time work opportunities provide students with the means to strengthen both their financial resilience and career growth. Policy initiatives that combine financial literacy training with employability skills development can create a more holistic approach to preparing graduates for competitive job markets.

The overall implication of this study is that financial competence is not only a personal skill but also a collective responsibility of the higher education ecosystem. By applying these recommendations, universities and policymakers can foster a generation of graduates who are financially resilient, strategically prepared, and well positioned to achieve sustainable career growth.

5.3 Further Study

While this study has provided valuable insights into the relationship between financial management competence and career growth among undergraduate students, certain limitations should be acknowledged, and future research directions may be considered. The study was conducted within a single institution, which may limit the generalizability of the findings to other universities with different demographic or cultural contexts. Future research should therefore expand the scope by including multiple institutions or conducting cross-regional comparisons to enhance external validity.

The study also relied on self-reported questionnaire data, which may be subject to response bias. Further research may adopt a mixed-methods approach by combining surveys with interviews or focus groups to provide a more nuanced understanding of how financial behaviors influence career growth. In addition, longitudinal studies should be conducted to track changes in students' financial planning and career development over time, which would provide stronger evidence of causality compared to the cross-sectional design used in this study.

Another area for future research may involve exploring additional variables that could mediate or moderate the relationship between financial management competence and career growth. Factors such as psychological resilience, social support, or institutional career services should be examined as potential contributors that shape how financial competence translates into career outcomes. Moreover, future studies may investigate how digital financial tools, such as mobile budgeting applications and online financial education platforms, influence students' financial planning and career readiness in the era of digital transformation.

Further studies should broaden the research context, adopt more diverse methodologies, and explore additional variables to provide a more comprehensive understanding of the link between financial competence and career growth. Such efforts

may not only enrich theoretical development but also offer practical strategies for improving financial and career education in higher education institutions.



References

- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). University of Chicago Press.
- Chen, Y. (2020). The challenges of financial preparation for postgraduate education among Chinese undergraduates. *Journal of Educational Finance in China*, 19(2), 54–66.
- Chen, Y., & Li, H. (2023). Financial resilience and career decision-making among Chinese undergraduates. *Journal of Higher Education Research*, 43(2), 66–79.
- Chen, Y., & Liu, M. (2020). The effect of financial planning on college students' career readiness: Evidence from Beijing universities. *Journal of Higher Education Research*, 41(3), 112–124.
- Huang, J., & Zhang, Y. (2020). Career growth and employability of Chinese undergraduates in a competitive labor market. *Journal of Higher Education Research*, 41(5), 88–99.
- Huang, J., & Zhao, L. (2021). Financial strategies for long-term career planning in Chinese universities. *Modern Education Research*, 33(5), 101–113.
- Huang, X., & Sun, J. (2021). Human capital investment and career development of Chinese undergraduates. *Educational Economics Review*, 37(2), 45–59.
- Johnson, P. (2021). Financial planning behaviors and career readiness of undergraduates in the United States. *International Journal of Educational Development*, 80, 102278.
- Johnson, P., & Lee, R. (2021). Beyond employability: Defining career growth among university students. *International Journal of Career Studies*, 46(2), 102–115.
- Johnson, R., & Miller, J. (2021). Financial competence and employability: Evidence from university students. *International Journal of Educational Development*, 79, 102285.
- Li, H., & Wang, Q. (2019). Financial literacy and employability of Chinese undergraduates: A survey study. *China Youth Studies*, 29(6), 98–105.
- Li, Q., & Chen, L. (2021). Financial planning for career education and employability of Chinese undergraduates. *China Youth Studies*, 33(5), 91–103.
- Liu, X., & Xu, M. (2020). Financial stress and coping strategies of undergraduates in Beijing. *China Youth Studies*, 30(7), 101–112.
- Liu, Y., & Chen, H. (2021). Financial literacy and educational investment strategies of Chinese undergraduates. *Journal of Higher Education Research*, 42(3), 75–86.
- Liu, Y., & Zhang, X. (2020). Financial literacy education and career planning among Beijing undergraduates. *Journal of Chinese Higher Education Studies*, 38(5), 112–123.
- Thompson, K. (2023). Financial literacy as a predictor of career growth among young professionals. *Journal of Career Development Studies*, 50(1), 67–82.

- Thompson, K., & Miller, J. (2019). Student financial resilience and early career development: A comparative study. *International Journal of Educational Research*, 98, 55–68.
- Thompson, R., & Davis, K. (2023). Financial planning for employability: A European perspective on student career development. *Journal of Career Development Studies*, 51(2), 121–135.
- Wang, L. (2021). The challenge of aligning financial planning with long-term career goals in Chinese universities. *China Youth Studies*, 32(7), 87–96.
- Wang, L., & Li, X. (2020). Career education and financial decision-making of college students in Beijing. *China Youth Studies*, 31(6), 92–101.
- Wang, T., & Sun, Q. (2023). Linking financial foresight with sustainable career development in Chinese higher education. *China Youth Studies*, 32(4), 95–108.
- Wang, Z. (2022). Financial resilience and risk management of university students in Beijing. *Modern Education Management*, 40(4), 133–142.
- Zhang, H. (2022). Coping with uncertainty: Financial strategies and career growth perceptions of undergraduates. *Educational Economics Review*, 40(2), 97–110.
- Zhang, L. (2021). The role of financial planning in shaping undergraduates' career growth. *Journal of Educational Finance in China*, 18(2), 56–70.
- Zhang, M. (2022). The role of financial planning in career-oriented training participation among Chinese undergraduates. *Educational Economics Review*, 39(4), 110–124.
- Zhang, Y., & Wang, H. (2023). Financial risk coping ability and its influence on undergraduates' career growth. *Modern Education Management*, 35(1), 99–111.
- Zhao, H. (2022). Financial risk coping strategies of university students in Beijing: Implications for career development. *Modern Education Management*, 41(4), 101–115.
- Zhou, Q., & Wang, L. (2021). Coping with financial risks in Chinese higher education: Implications for student career growth. *Modern Education Management*, 34(6), 92–104.

Appendix

Questionnaire

Dear Student,

You are invited to participate in this academic survey which aims to investigate the relationship between financial management competence and career growth among undergraduate students at Beijing Institute of Petrochemical Technology. Your responses will remain anonymous and confidential, and the data will be used solely for academic research purposes. Please answer honestly based on your personal experiences. The questionnaire will take approximately 10–15 minutes to complete.

Thank you for your valuable contribution.

Please indicate the extent to which you agree with each statement.

1. I allocate part of my budget specifically for training courses or workshops that improve my career skills.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

2. I actively save money to pay for professional certifications or qualification exams.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

3. I plan my financial resources in advance to participate in internships or career-related activities.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

4. I consider career development expenses (e.g., training, workshops) as a necessary investment.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

5. I adjust my monthly expenses to ensure I can afford career-related education costs.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

6. I save money regularly to prepare for postgraduate education or advanced study.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

7. I have a financial plan for supporting long-term goals such as studying abroad or starting a business.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

8. I evaluate long-term financial needs when considering my career development.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

9. I am financially prepared to invest in opportunities that may arise in the future.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

10. I set aside money for long-term career advancement rather than spending it on short-term needs.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

11. I always keep some emergency savings to deal with unexpected financial situations.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

12. I have strategies to manage sudden increases in living or study expenses.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

13. I am confident in my ability to handle financial difficulties without harming my career plans.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral

- 4 Agree
- 5 Strongly Agree

14. I diversify my sources of income (e.g., part-time jobs, allowances, scholarships) to reduce risks.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

15. I can adjust my spending quickly if my financial situation changes unexpectedly.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

16. I believe I am becoming more employable as a result of my current efforts and planning.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

17. I am confident about my career development path after graduation.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

18. I have improved my professional skills to support future career advancement.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

19. I can adapt to changes and uncertainties in the job market.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

20. I feel I am on track to achieve long-term success in my career.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

21. Gender

- Male
- Female
- Prefer not to say

22. Age

- 18–19 years
- 20–21 years
- 22–23 years
- 24 years or above

23. Year of Study

- Freshman (Year 1)
- Sophomore (Year 2)
- Junior (Year 3)
- Senior (Year 4)

24. Major Field of Study

- Engineering
- Business/Management
- Humanities/Social Sciences
- Sciences
- Others (please specify): _____

25. Average GPA (self-reported)

- Below 2.5
- 2.5–2.9
- 3.0–3.4
- 3.5–4.0

26. Do you currently have part-time work experience?

- Yes
- No

27. Monthly Financial Source (primary)

- Family/Parents' support
- Scholarship/Grant
- Part-time job
- Other (please specify): _____

Thank you for completing this questionnaire. Your participation is highly appreciated. The findings will contribute to a better understanding of how financial management competence supports the career growth of undergraduate students.