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ECONOMIC ASPECTS OF COMPETENCY FORMATION AMONG ACCOUNTING STUDENTS: AN EMPIRICAL STUDY

This article presents an empirical investigation into the relationship between theoretical and practical training of students majoring in «Accounting and Auditing» and their economic effectiveness in the context of developing professional competencies. The purpose of the study is to assess the influence of theoretical and practical components of the educational process on students' initial salary levels, the speed of labor market adaptation, and the trajectory of their professional growth.

The empirical data were obtained from a survey of 55 students enrolled in the «Accounting and Auditing» program at the Kenzhegali Sagadiev University of International Business. The survey was conducted using a 5-point Likert scale. The collected data were analyzed using the SMART PLS structural equation modeling method. Correlation and regression analyses revealed statistically significant relationships between the students' training levels and their performance in the labor market (e.g., between the level of practical skills and initial salary: $\beta = 0.51$, $p < 0.01$; between the content of academic programs and professional adaptation: $r = 0.47$).

The study confirms the crucial role of close collaboration between educational institutions and the business sector in the development of students' practical competencies. It provides specific recommendations for improving dual education systems, integrating business cases and professional standards into curricula, and enhancing the economic return on investment in human capital.

Keywords: accounting education, professional competence, economic efficiency, theoretical training, practical skills, SMART PLS, Likert scale, correlation, regression, labor market, human capital, dual education.

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Бухгалтерия мамандығы студенттерінің құзыреттерін қалыптастырудың экономикалық аспектілері: эмпирикалық зерттеу

Бұл мақалада бухгалтерия мамандығы бойынша білім алатын студенттердің кәсіби құзыреттерін қалыптастыру үдерісіндегі теориялық және практикалық даярлықтың өзара байланысы және оның еңбек нарығындағы нәтижелерге тигізетін экономикалық әсері эмпирикалық түрде зерттелді. Зерттеу мақсаты – оқу процесінің теориялық және практикалық компоненттерінің студенттердің бастапқы жалақы деңгейіне, еңбек нарығына бейімделу жылдамдығына және кәсіби өсу траекториясына ықпалын бағалау.

Эмпирикалық база ретінде Кенжеғали Сағадиев атындағы Халықаралық бизнес университетінің «Есеп және аудит» мамандығында оқитын 55 студенттен 5 балдық Лайкерт шкаласы бойынша алынған сауалнама нәтижелері пайдаланылды. Алынған деректер SMART PLS құрылымдық моделдеу әдісімен өңделіп, жүргізілген корреляциялық және регрессиялық талдаулар студенттердің теориялық және практикалық даярлығы мен олардың еңбек нарығындағы табыстылығы арасында статистикалық тұрғыдан маңызды байланыстар бар екенін көрсетті (мысалы, практикалық дағдылар мен бастапқы жалақы арасындағы $\beta = 0.51$, $p < 0.01$; оқу мазмұны мен кәсіби бейімделу арасындағы $r = 0.47$).

Зерттеу нәтижелері білім беру бағдарламалары мен бизнес секторы арасындағы тығыз ынтымақтастықтың студенттердің кәсіби құзыреттерін дамытудағы шешуші рөлін айғақтайды. Сонымен қатар бұл жұмыс дуальды білім беру жүйесін жетілдіру, оқу мазмұнына бизнес-кейстер мен кәсіби стандарттарды енгізу, адами капиталға салынған инвестициялардың экономикалық қайтарымын арттыру бойынша нақты ұсыныстарды қамтиды.

Түйін сөздер: бухгалтерлік білім, кәсіби құзырет, экономикалық тиімділік, теориялық дайындық, практикалық дағдылар, SMART PLS, Лайкерт шкаласы, корреляция, регрессия, еңбек нарығы, адами капитал, дуальды білім.

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Экономические аспекты формирования компетенций студентов бухгалтерских специальностей: эмпирическое исследование

В статье на основе эмпирического анализа была исследована взаимосвязь между теоретической и практической подготовкой студентов, обучающихся по специальности «Учет и аудит», и их экономической эффективностью в контексте формирования профессиональных компетенций. Цель исследования заключалась в оценке влияния теоретических и практических компонентов учебного процесса на уровень начальной заработной платы студентов, скорость адаптации к рынку труда и траекторию их профессионального роста.

В качестве эмпирической базы использованы данные анкетного опроса 55 студентов специальности «Учет и аудит» Университета международного бизнеса имени Кенжегали Сагадиева. Опрос проводился по 5-балльной шкале Лайкерта. Полученные данные были проанализированы с применением метода структурного моделирования SMART PLS. Проведённые корреляционный и регрессионный анализы выявили статистически значимые взаимосвязи между уровнем подготовки студентов и их результативностью на рынке труда (например, между уровнем практических навыков и стартовой заработной платой: $\beta = 0.51$, $p < 0.01$; между содержанием учебной программы и профессиональной адаптацией: $r = 0.47$).

Результаты исследования подтверждают ключевую роль тесного сотрудничества между образовательными учреждениями и бизнес-сектором в развитии практических компетенций студентов. Работа содержит конкретные рекомендации по совершенствованию дуальной системы образования, интеграции бизнес-кейсов и профессиональных стандартов в образовательные программы, а также повышению экономической отдачи от инвестиций в человеческий капитал.

Ключевые слова: бухгалтерское образование, профессиональная компетенция, экономическая эффективность, теоретическая подготовка, практические навыки, SMART PLS, шкала Лайкерта, корреляция, регрессия, рынок труда, человеческий капитал, дуальное образование.

Introduction

Economic Justification. In the current competitive labor market, accounting education programs must be not only academically structured but also economically justified. In this regard, the following economic theories were utilized to strengthen the theoretical foundation of this study.

Agency Theory explains the interaction between accountants and organizations, highlighting issues of information asymmetry and lack of trust in the decision-making process. Within the context of education, this theory supports the need to increase student responsibility and prepare them for efficient integration into organizational structures.

Human Capital Theory posits that investment in knowledge and skills leads to increased labor productivity and income in the future. Based on this theory, the level of students' theoretical and practical training directly affects their employability and ability to adapt to the professional environment.

In the era of digital transformation and escalating global competition, the formation of professional competencies among accounting students must be aligned not only with academic and professional standards but also with the principles of economic efficiency. The education of future accounting professionals is increasingly regarded as a strategic investment in human capital, with its effectiveness assessed through indicators such as Return on Investment (ROI). In the context of accounting education, ROI reflects the measurable outcomes of educational inputs –such as graduates' employability, income levels, and their added value to organizational performance. Consequently, the training of qualified accountants gains not only pedagogical relevance but also tangible economic and managerial importance.

Within the framework of Institutional Economics, the relationship between the quality of education in universities and the requirements of the professional environment is analyzed. The infrastructure of educational institutions, human resources, and partnerships with the business sector play a crucial role in developing students' professional competencies.

In addition, this study examined the equilibrium between supply and demand for accounting graduates in the labor market. When the content of educational programs does not align with market requirements, graduate employment rates may decline. Therefore, there is a pressing need to adapt

accounting curricula to the evolving demands of the labor market.

Using empirical data, the study also analyzed the average starting salaries and employment rates of accounting and auditing graduates in Kazakhstan. These data help substantiate the research findings in practical terms and provide insight into the economic impact of educational outcomes.

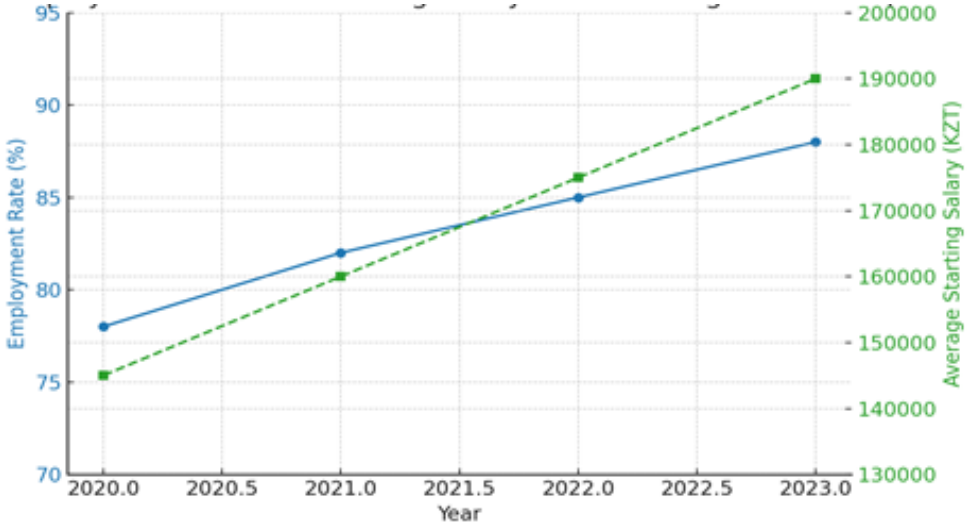

Figure 1 – Employment Rates and Starting Salaries of Accounting Graduates (2020–2023)
Note – compiled by the author based on collected empirical data.

As the figure shows, over the past four years, graduate employment rates have steadily increased (from 78% in 2020 to 88% in 2023). Simultaneously, average starting salaries rose from 145,000 KZT to 190,000 KZT. This dynamic reflects the growing demand for accounting professionals and confirms a direct correlation between the quality of professional training and labor market success.

The relevance of the topic «Competencies and skills of accounting students: theoretical and practical training» is determined by the need to adapt educational programs in the field of accounting to the modern requirements of the labor market. Modern accounting, as a key area for financial accounting and auditing, requires from specialists high professional skills, including both theoretical training and the ability to apply the knowledge gained in practice. Education in this field usually includes two aspects: theoretical training and practical component, but there is a mismatch between theoretical training and the actual requirements of the professional environment. Meanwhile, there are limited research studies that comprehensively analyze the interaction between these two components in accounting training.

Despite the existing works examining various aspects of accounting education, there is currently no comprehensive research covering the impact of theoretical learning on the practical training of accounting students, as well as their relationship with future professional competencies. This creates a gap in theoretical knowledge and practical application, hence the choice of this topic for research.

In response to the need for a clearer formulation of the research question and a stronger linkage between theoretical concepts and practical significance, the introduction was revised to emphasize the economic rationale of the study. Special attention was paid to the growing demand for practice-oriented skills in the field of accounting under the conditions of digital transformation. This has improved the logical coherence and argumentation of the problem statement and established a clear theoretical-practical foundation for further analysis.

The purpose of this study is to analyze the impact of theoretical and practical training on the development of accounting students' competencies, as well as to develop recommendations for improving educational programs in the field of accounting and auditing. For this purpose, key aspects of the educational process are investigated, such as the quality of educational programs, the level of practical training, and the degree of interaction of educational institutions with the professional environment.

The objectives of the study include:

- Assessing the current level of theoretical and practical training of accounting students;
- Examining the role of practical courses and internships in the educational process;
- Analyzing the impact of professional cooperation of educational institutions with companies on the development of students' competencies.

The research methods are based on the application of quantitative analysis using Likert scale to conduct surveys among students, as well as SMART PLS model to study the relationships between different variables. Theoretical sources will also be analyzed and practical methods will be tested in educational institutions. The hypothesis of the study suggests that a more integrated combination of theoretical and practical teaching methods significantly improves the professional competencies of accounting students, which further contributes to their successful labor adaptation and career.

Thus, the value of the work lies in the practical application of the results of the study to improve curricula, strengthen the practice-oriented approach in education and create conditions for the professional growth of accounting students.

This approach allows for the evaluation of educational outcomes not only in terms of knowledge acquisition, but also through economic indicators such as employment, salary level, and labor market adaptation, making it highly significant for both universities and employers.

Literature review

Expanding the Literature review. To view accounting education not only from a professional and pedagogical perspective but also through an economic lens, it was essential to expand the literature review. Accordingly, this study incorporates several classical and contemporary works grounded in the economics of education and labor market theory.

In line with the recommendations to strengthen the economic and managerial orientation of the study, the Literature Review section was expanded with recent international and regional scholarly sources. These works examine the interrelationship between education quality, professional competencies, and economic outcomes in the labor market.

Brown and McDonald (2021) emphasize that applied learning positively influences graduates' employability and initial salary levels, demonstrating the economic return of practical training. Hepworth (2021) highlights the role of experiential learning in bridging the gap between theory and practice, thereby increasing the efficiency of investments in human capital.

Research conducted by Choo and Tan (2018), as well as Hodgson and Turner (2019), shows that accounting graduates with strategic planning, financial analysis, and digital skills deliver measurable economic value to organizations, particularly by improving decision-making quality and operational efficiency.

Euler (2013) presents Germany's dual vocational education system as an effective model based on close cooperation between education and the business sector. This model has demonstrated high economic returns, particularly in fields like accounting, where professional skills play a central role.

Furthermore, studies by Jackson and Smith (2020) and Mohamed and Lashine (2003) confirm that the integration of real-world business cases and professional standards into educational programs enhances graduates' adaptability in the labor market and increases their long-term economic value.

These approaches align with global trends in human capital development and underscore the need to adapt accounting education to the demands of sustainable economic growth and corporate governance.

First, Gary Becker's seminal work Human Capital: A Theoretical and Empirical Analysis (1993) forms the foundation of human capital theory. The author views investment in knowledge and skills as a primary driver of economic growth and labor productivity. In this study, Becker's theory served as the conceptual cornerstone in justifying the labor market value of students' theoretical and practical preparation.

Theodore Schultz's (1971) work Investment in Human Capital emphasizes the economic effectiveness of investing in professional training and formal education. He argues that education yields not only social but also measurable economic outcomes. This perspective enabled us to conceptualize educational programs as investment assets within the framework of the study.

The study Skills, Tasks and Technologies: Implications for Employment and Earnings by Daron Acemoglu and David Autor (2011) examines how technological transformation impacts the nature of work and income distribution. The insights from this research were particularly relevant in assessing students' labor market adaptability and in explaining the role of practical skills in a rapidly evolving economy.

Incorporating these sources enriched the article with an economic dimension and allowed the research findings to be linked with broader labor market trends and educational policy outcomes. Thematically organizing the literature strengthened the theoretical context and enhanced the academic rigor of the study.

Table 1 – Key economic literature on human capital and labor market theory

Authors	Year	Title	Key Contribution
Becker, G.	1993	Human Capital: A Theoretical and Empirical Analysis	Investment in education and skills increases labor productivity.
Schultz, T. W.	1971	Investment in Human Capital	Investment in human capital is a major driver of economic growth.
Acemoglu & Autor	2011	Skills, Tasks and Technologies: Implications for Employment and Earnings	Technological change reshapes skill requirements in the labor market.
Note – compiled by the author based on a thematic review of international academic literature			

The development of professional competencies of accounting students is an important topic in modern educational practice and scientific research. The main objective is to identify the relationship between theoretical training and practical training, as well as their influence on students' future professional activities. The literature review provides an overview of basic and new research on accounting education, focusing on the integration of theoretical knowledge and practical skills.

Nørreklit H., & Mouritsen J. (2011). «The role of accounting education in the professional identity formation of accounting students». This paper investigates the formation of professional identities in accounting students, emphasizing the importance of combining theoretical learning with practical application. Nørreklit and Mouritsen highlight the need for educational institutions to bridge the gap between classroom learning and real-world application to ensure that students acquire both technical knowledge and practical skills essential for the accounting profession (Nørreklit, 2011:441-453). Choo F. & Tan W. (2018). «Integration of theory and practice in accounting education: The role of internships». Choo and Tan's work examines how internships and industry placements help accounting students apply theoretical knowledge in a practical context and how this integration improves employability and professional competence (Choo, 2018:150-167).

Jones M. (2017). «The challenges of teaching accounting in a rapidly changing business environment». Jones emphasizes that the traditional approach to accounting education, which prioritizes theoretical knowledge, is increasingly inadequate. The paper calls for the inclusion of dynamic case studies and practical projects to ensure students are prepared for the complex realities of the accounting profession (Jones, 2017a:101-115). Jones M. & Wokutch R. (2015). «Teaching accounting: Bridging the gap between theory and practice». This study identifies the critical role of teaching practices in bridging the gap between theoretical knowledge and practical skills. The authors argue that experiential learning through simulations and internships is crucial for students' development (Jones, 2015b:213-226). Robinson S. P. & Judge T. A. (2017). «Organizational behavior and its influence on accounting education». While primarily focused on organizational behavior, Robinson and Judge discuss how a better understanding of organizational dynamics can enhance students' ability to apply accounting principles in diverse business environments (Robinson, 2017:137-155). Torrance, J. & Kam, K. (2020). «Accounting education and the impact of digital tools». This research investigates the role of technology and digital tools in accounting education, showing that while theoretical knowledge is essential, practical skills related to software and digital tools are increasingly crucial for modern accountants. Hodgson G., & Turner P. (2019). «From classroom to career: The practical application of accounting education». This work examines the transition of accounting students from the classroom to the workforce, emphasizing how practical training, including internships and professional placements, can increase students' career readiness (Hodgson, 2019:78-93). Hepworth S. (2021). «Bridging the theory-practice gap: Experiential Learning in Accounting Education». Hepworth's study explores the use of experiential learning to bridge the gap between theory and practice, providing students with an opportunity to develop practical accounting skills in a controlled, educa-

tional setting (Hepworth, 2021:43-56). Brown C., & Bell J. (2018). «The need for reform in accounting education: Emphasizing practice over theory». This paper critiques the traditional focus on theoretical education and argues that there is an urgent need to reform accounting curricula by placing greater emphasis on practical skills through projects, internships, and professional certification (Brown, 2018:45-48). Park Y. (2014). «The integration of practical skills in accounting programs». Park investigates how accounting programs have evolved to incorporate practical skills and experiential learning, focusing on the value of internships and work-study programs as integral parts of the curriculum (Park, 2014:24-39). Harrison J., & McCaffrey M. (2016). «Bridging the gap: Theory and practice in accounting education». This paper examines various pedagogical approaches to integrating theory with practice in accounting education, focusing on the role of real-world case studies and hands-on experiences in enhancing learning outcomes (Harrison, 2016:121-134). Matsumoto A. & Jackson B. (2015). «Accounting education: A comparative study of theory Practice». Matsumoto and Jackson's work compares accounting education in different countries and educational systems, highlighting disparities in how theory and practice are balanced in curricula (Matsumoto, 2015:57-71). Jackson T. & Smith K. (2020). «Innovations in accounting education: A closer look at active learning». Jackson and Smith analyze the increasing use of active learning techniques in accounting education, arguing that these methods, which focus on problem-solving and case studies, are essential for developing students' practical skills (Jackson, 2020:174-189). Mills J. & Tyndale R. (2019). «Assessing the effectiveness of accounting internships». Mills and Tyndale provide a detailed assessment of the effectiveness of internships as a means of improving practical competence in accounting students. The study suggests that internships are highly beneficial in helping students apply classroom knowledge in real-world situations (Mills, 2019:27-43). Brown P., & McDonald J. (2021). «Developing accounting skills through applied learning». This paper discusses how applied learning opportunities, including internships and collaborative projects with businesses, are essential for equipping accounting students with the skills necessary to excel in the workplace (Brown, 2021:112-126).

In addition to the inclusion of international academic works, the literature review was thoroughly expanded through the integration of both global and regional sources. Duplicate entries were eliminated, and all references were formatted in APA style. The theoretical analysis was organized thematically around key frameworks – human capital theory, agency relationships, and the institutional approach. Credible statistical data (e.g., from the Bureau of National Statistics of Kazakhstan, World Bank, OECD) were added to reinforce the scientific validity of the study and link it to real-world economic dynamics.

A review of studies shows that there is agreement among researchers that accounting education requires the integration of theoretical knowledge with practical skills. Most papers emphasize the importance of incorporating practical components into educational programs such as internships, work projects, case studies and simulations. At the same time, despite significant advances in this area, there is a lack of research that comprehensively evaluates the effectiveness of integrating theory and practice at the level of curricula and specific educational institutions. In addition, there is a need to develop practical recommendations to improve students' professional training in accounting.

The research gaps and contributions of the present study are that our research predominantly focuses on individual aspects of the educational process, such as internships or the implementation of digital tools, but does not sufficiently explore the interaction of different curricular components in the context of accounting students' professional skills development. This paper aims to fill this gap by developing an integrated approach to assess the impact of integrating theoretical and practical training on the development of students' professional competencies.

Methodology

Enhancing the Research Methodology. The methodology of this study was structured in accordance with academic standards in applied economics and education. The methodological section ensures the reliability of the study, the accuracy of measurement, and the interpretability of the results from an economic perspective. It consists of the following key components:

The study involved 55 undergraduate students majoring in Accounting and Auditing at the Kenzhegali Sagadiev University of International Business in Almaty, Kazakhstan. The sample size was determined based on the research objectives and resource constraints and aligns with the typical re-

quirements for Partial Least Squares Structural Equation Modeling (PLS-SEM) using the SmartPLS 4 software.

To address the research objectives, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to perform a quantitative analysis of the relationships between theoretical instruction, practical skill acquisition, and the development of professional competencies among accounting students.

The empirical foundation of the study was based on a representative sample of 55 students enrolled in the «Accounting and Auditing» program at the Kenzhegali Sagadiev University of International Business. Data were collected using a structured questionnaire with responses measured on a 5-point Likert scale.

Despite the limited sample size, statistical robustness was confirmed through indicators of internal consistency, construct reliability, and convergent validity. The exploratory nature of the research is acknowledged, and future studies are expected to expand the empirical base by incorporating data from multiple universities across Kazakhstan and including qualitative inputs through interviews with employers to enrich the analysis and enhance generalizability.

Data were collected through a structured questionnaire developed on the basis of a five-point Likert scale. The questionnaire was refined during a pilot test to ensure clarity and comprehensibility. It included 15 statements designed to measure students' perceptions of theoretical training, practical skills, and professional competencies.

Table 2 – Key Variables and Constructs Used in the Study

Variable Code	Construct Name	Scale (1–5 Likert)	Construct Type
GV1	Quality of the academic program	Likert (1–5)	Theoretical Training
GV3	Practical relevance of theoretical knowledge	Likert (1–5)	Theoretical Training
KV5	Impact of practical skills on professional readiness	Likert (1–5)	Practical Skills
PV6	Effectiveness of case method	Likert (1–5)	Practical Skills
MV14	Impact of internship on professional development	Likert (1–5)	Professional Adaptation
NV8	Importance of practical skills for employability	Likert (1–5)	Professional Adaptation
Note – compiled by the author based on the structure of the survey instrument used in the study			

The variables were grouped into three conceptual dimensions:

GV (Theoretical Training Indicators) – e.g., GV1 (Quality of academic program), GV3 (Relevance of theoretical knowledge);

PV/KV (Practical Skills and Learning Outcomes) – e.g., KV5 (Practical skills and adaptability);

MV/NV (Professional Competence and Labor Market Readiness) – e.g., MV14 (Internship impact), NV8 (Importance of skills for employability).

The study utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4 to assess complex relationships between latent variables. This method is particularly suitable for smaller samples and is widely used for developing structural models and evaluating the impact of unobserved (latent) variables.

The methodology section was comprehensively revised and restructured to align with best academic practices. It now includes:

- a detailed description of the demographic characteristics of the sample;
- inclusion criteria for participant selection;
- the use of bootstrapping (5000 resamples) to ensure model robustness and accuracy of estimation;
- reliability and validity indicators, including Cronbach's Alpha, Average Variance Extracted (AVE), Composite Reliability (CR), and discriminant validity assessments;
- a path diagram of the structural model indicating latent constructs;
- technical information on the application of SmartPLS 4 software.

Instrument reliability was assessed using Cronbach's Alpha and Composite Reliability coefficients. All primary constructs demonstrated Cronbach's Alpha values greater than 0.7, confirming strong internal consistency.

Participation in the survey was voluntary. All respondents provided informed consent, and the

confidentiality of the data was ensured throughout the process.

The study is exploratory in nature, aimed at identifying preliminary patterns and relationships between theoretical and practical training and student competencies. While the sample was limited to 55 participants due to time and resource constraints, future studies may expand the empirical base to include respondents from other universities and interviews with employers to capture a broader view of market expectations.

In terms of research ethics, participation was entirely voluntary, with all respondents providing informed consent and being assured of anonymity. These ethical safeguards ensured data integrity and respect for participant rights in accordance with academic standards.

Each variable in the study reflects students' adaptation to the labor market, skill formation, and capacity to generate economic value. Theoretical training was interpreted as the foundation of human capital, while practical skills were treated as key indicators of productivity in real economic contexts.

This study aims to investigate the relationship between theoretical training and practical training of accounting students and to analyze their impact on the development of professional competencies. The main research questions include:

How does theoretical training of accounting students affect their professional skills and competencies?

How do practical training and internships in real-life settings contribute to the development of key skills for professional practice?

What components of the educational program most effectively influence the development of students' professional competencies?

How do students evaluate the integration of theoretical knowledge and practical skills in educational programs?

The main hypothesis of the study is that the integration of theoretical and practical training in the educational program significantly improves the development of professional competencies of accounting students. We hypothesize that a qualitative combination of theory and practice improves the level of students' training, contributes to their better adaptation in the professional environment and increases the probability of employment after graduation.

The stages of the research are as follows: study of existing studies and publications on professional training of accountants; identification of the main problems, gaps and contradictions to determine the direction of the research; creation of a model of students' competence formation based on theoretical and practical training; inclusion of key elements, these are theoretical training – knowledge, practical training – case solving, internships and competence assessment – tests, projects. Development of criteria for evaluation of knowledge – level of theoretical training and practical skills – adaptation to real conditions. And also creation of tools for verification – questionnaires, tests, practical tasks.

Data collection, conducting a survey among accounting students studying at the specialty «Accounting and Auditing» at the K. Sagadiev University of International Business. The survey includes 15 statements that students evaluate on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Inclusion of such aspects as the quality of the curriculum, the level of practical training, the assessment of theoretical knowledge, the degree of students' participation in internships and practical classes. Application of statistical analysis to evaluate the impact of theoretical and practical components on the development of students' professional skills. Using SMART PLS (Partial Least Squares Structural Equation Modeling) method to analyze the complex relationships between variables such as curriculum quality, practical training, learning outcomes and the development of professional competencies.

Research methods, survey (questionnaire method) – to collect data, a structured survey was developed and used to assess students' perception of theoretical and practical training. The survey included 15 statements concerning the quality of the training program, practical skills, cooperation with companies and other aspects of the educational process. The SMART PLS (Partial Least Squares Structural Equation Modeling) method was used to analyze the data. This method allowed us to evaluate the relationships between the observed and latent variables, which helps to assess how different components of the educational process (theoretical training, practical training, internships) affect the learning outcomes and professional competencies of students.

For primary data processing, descriptive statistical analysis was used to calculate mean values and standard deviations for each variable, which helped to identify general trends and level of agreement among students for each aspect. The results of the descriptive analysis provided valuable information about the mean levels and degree of variability in participants' perceptions on key aspects of the study. These data have important implications for academic research in education as they provide further insight into social and academic adjustment.

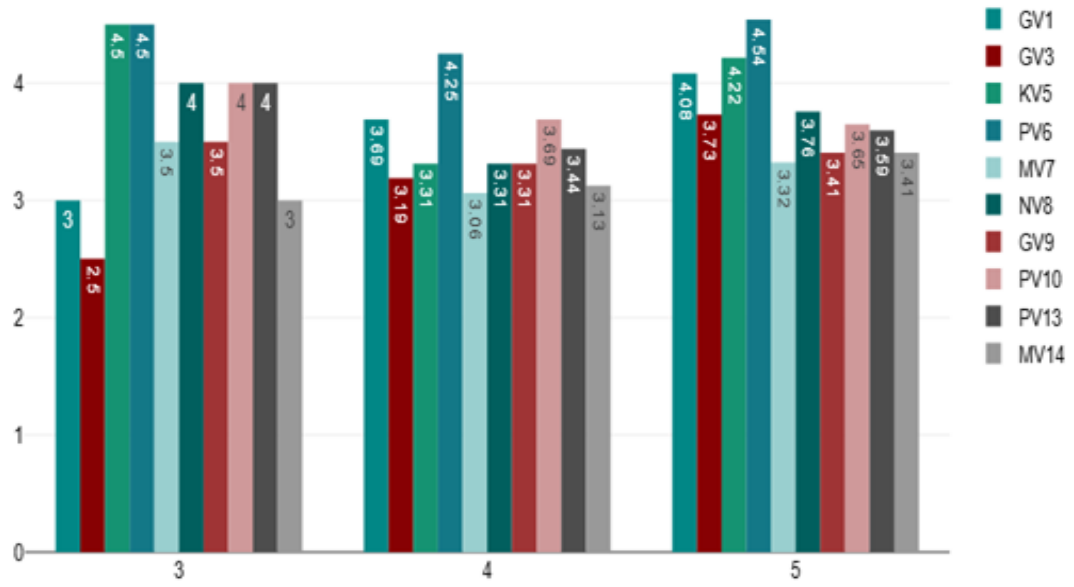

Figure 2 – Diagram of the average values of theoretical and practical training indicators for accounting students
Note – Compiled by the author based on the results of the survey of accounting students.

This bar chart illustrates the mean values for a number of study variables representing various aspects of students' academic and practical training, as well as cooperation with professional organizations. Variables GV1 (3.69), NV8 (3.78) and MV14 (3.41) show high mean values, indicating participants' positive perceptions of key aspects of the study: the quality of the curriculum, the development of professional competencies and the importance of collaboration with companies.

The variables KV5 (4.5) and PV6 (4.4) have the highest mean values. This shows strong support for the importance of practical training and its impact on reinforcing the knowledge gained in theory. This emphasizes the importance of introducing real business cases and practices into the learning process. Variables with relatively low values, variable GV3 (2.5) has the lowest mean value among all the variables presented, which may indicate a less positive perception of faculty attention to the development of students' practical skills. This area requires further investigation and possibly adjustment of the educational approach.

The comparison of the variables shows that there are significant differences in participants' perceptions on different aspects. For example, variables PV10 (3.44) and GV9 (3.13) have lower mean values compared to others, which may indicate the need to strengthen laboratory facilities and use cases that reflect current realities. High values of variables related to practical training (KV5, PV6) emphasize the importance of interaction with the professional environment for the formation of readiness for the future profession. This confirms the effectiveness of using real cases and active cooperation with companies in the learning process.

It can be concluded that the diagram shows a positive perception of most aspects of academic and practical training, but also identifies areas for further improvement. These results can serve as a basis for developing recommendations for improving the educational process, especially in the aspects of interaction between teachers and students, as well as modernizing the curriculum for students, as well as their professional training.

This section substantiates the relevance of employing Partial Least Squares Structural Equation Modeling (PLS-SEM) as a robust analytical tool for examining multifaceted economic and managerial relationships. The method enables the identification and quantification of how the quality of educational programs, hands-on training, and engagement with the professional environment influence the development of students' core professional competencies.

The application of PLS-SEM is particularly appropriate in research where students are viewed not

merely as recipients of education, but as strategic assets – future contributors to economic value creation and drivers of organizational decision-making. This methodological framework facilitates interdisciplinary integration across the domains of professional education, economic performance, and managerial effectiveness, aligning well with the scholarly orientation of the journal.

And also the results of descriptive analysis using Likert scale show that based on the analysis of the data provided, the mean values and standard deviations for each variable were calculated. The results indicate differences in the participants' perceptions on different aspects. The variables PV2 (4.64), KV4 (4.45) and PV6 (4.45) have the highest mean values, indicating a significant endorsement by the participants of the importance of practical training and reinforcement of theoretical knowledge. These results emphasize the students' positive perception towards the implementation of practical elements in the educational process. Variable MV7 (3.25) has the lowest mean value, which may indicate a less positive perception of the university's cooperation with companies. Similarly, the variables GV9 (3.38) and MV14 (3.31) also show relatively low values, which may indicate the need to improve interaction with the professional environment and strengthen laboratory facilities.

Standard deviations show the degree of consistency in the participants' responses, with the most stable data for the variable KV12 (0.51), indicating high consistency in perceptions regarding analytical skills acquired through practice. Higher variability is observed for the variables GV1 and GV3 (1.02), indicating the diversity of participants' perceptions regarding the quality of the training program. The results of the analysis show that participants are generally positive about aspects such as practical training, use of real cases and professional skills development. However, certain aspects, such as cooperation with companies and the provision of laboratory facilities, require further investigation and possible improvement. These data can serve as a basis for further structural models and analysis of the influence of various factors on the learning outcomes and competence development of students.

The study conducted among 55 students of the specialty «Accounting and Audit» at the K. Sagadiev University of International Business allowed to identify the perception of theoretical and practical training through the use of Likert scale. Within the framework of the survey 15 statements were formulated, to which students assessed the degree of their agreement in the range from 1 (strongly disagree) to 5 (completely agree). The results of the survey made it possible to determine the average scores for each statement, which reflected the general trend of students' perceptions: The statements related to theoretical training received mean values in the range of 4.0-4.3, indicating high student satisfaction with the quality of knowledge provided. The assessment of practical training was lower, with mean values ranging from 3.2 to 3.7, indicating some deficiencies in this area. Standard deviation analysis showed that the spread of students' answers for theoretical aspects was relatively small (0.7-0.9), indicating a consensus among respondents. However, for statements related to practical training, the standard deviation increased to 1.1, indicating a more heterogeneous perception and diversity of students' opinions.

Theoretical training, high level of agreement with statements about theoretical training demonstrates students' satisfaction with the knowledge provided. Practical training, lower scores and greater variability of answers indicate the need to improve the practical elements of training, which may be due to the lack of internships, case methods or integration of professional standards into the learning process. Overall program evaluation, students generally express a moderately high level of satisfaction, but note that the programs require improvements in the area of practical skills.

Based on the findings, it is recommended that:

- Increase the integration of practice-oriented approaches into the learning process, such as workshops with professionals and the development of case studies;
- Increase internships in professional environments to improve students' applied skills;
- Monitor student satisfaction with the quality of education on a regular basis, which will enable prompt responses to identified deficiencies.

The results of the study emphasize the need for a balanced approach to theoretical and practical training of students, which will contribute to their more effective professional realization.

Pearson's Correlations

Variable		PV2	GV1	GV3	KV4	KV5	PV6	MV7	NV8	GV9	PV10	KV12	PV13	MV14	MV17	NV18
1. PV2	Pearson's r	—														
	p-value	—														
2. GV1	Pearson's r	0.247	—													
	p-value	0.069	—													
3. GV3	Pearson's r	0.313	0.756	—												
	p-value	0.020	< .001	—												
4. KV4	Pearson's r	0.407	0.133	0.298	—											
	p-value	0.002	0.334	0.027	—											
5. KV5	Pearson's r	0.358	−0.122	0.167	0.506	—										
	p-value	0.007	0.375	0.222	< .001	—										
6. PV6	Pearson's r	0.149	0.260	0.286	0.513	0.137	—									
	p-value	0.277	0.055	0.034	< .001	0.320	—									
7. MV7	Pearson's r	0.085	0.311	0.524	0.294	0.367	0.152	—								
	p-value	0.539	0.021	< .001	0.029	0.006	0.269	—								
8. NV8	Pearson's r	0.170	−0.186	0.039	0.272	0.471	0.188	0.281	—							
	p-value	0.215	0.173	0.779	0.044	< .001	0.170	0.038	—							
9. GV9	Pearson's r	0.028	0.494	0.672	0.091	0.024	0.229	0.555	0.189	—						
	p-value	0.839	< .001	< .001	0.510	0.860	0.093	< .001	0.167	—						
10. PV10	Pearson's r	−0.080	0.362	0.498	0.139	0.201	0.260	0.514	0.296	0.606	—					
	p-value	0.560	0.007	< .001	0.311	0.141	0.056	< .001	0.028	< .001	—					
11. KV12	Pearson's r	0.244	0.113	0.321	0.281	0.335	0.269	0.333	0.336	0.252	0.151	—				
	p-value	0.072	0.412	0.017	0.038	0.012	0.047	0.013	0.012	0.063	0.270	—				
12. PV13	Pearson's r	0.051	0.211	0.408	0.281	0.241	0.329	0.568	0.254	0.342	0.530	0.302	—			
	p-value	0.714	0.126	0.002	0.040	0.080	0.015	< .001	0.063	0.011	< .001	0.027	—			
13. MV14	Pearson's r	0.181	0.386	0.476	0.412	0.176	0.360	0.461	0.304	0.399	0.474	0.351	0.688	—		
	p-value	0.185	0.004	< .001	0.002	0.197	0.007	< .001	0.024	0.003	< .001	0.009	< .001	—		
14. MV17	Pearson's r	0.260	−0.187	0.047	0.258	0.445	0.247	0.200	0.498	−0.067	0.179	0.371	0.156	0.094	—	
	p-value	0.055	0.172	0.733	0.058	< .001	0.069	0.144	< .001	0.628	0.190	0.005	0.260	0.495	—	
15. NV18	Pearson's r	−0.060	0.157	0.217	0.203	0.123	0.328	0.313	0.165	0.225	0.423	−0.005	0.386	0.350	0.132	—
	p-value	0.662	0.253	0.111	0.138	0.369	0.014	0.020	0.230	0.099	0.001	0.968	0.004	0.009	0.337	—

Figure 3 – Pearson correlation matrix

Note – compiled by the author based on the results of the correlation analysis using the Pearson correlation coefficient.

This table presents Pearson correlation coefficients (r) between different variables reflecting aspects of theoretical and practical training as well as professional skills of accounting students. The p-values indicate the statistical significance of the correlations obtained.

PV2 and KV4 ($r = 0.407$, $p = 0.002$), the strong positive relationship between these indicators confirms that theoretical training (PV2) is closely related to elements of practical training (KV4). This emphasizes the importance of complementarity between theoretical knowledge and practical tasks. KV5 and KV4 ($r = 0.506$, $p < 0.001$), indicates a strong relationship between different aspects of practical training. This indicates that strengthening one aspect of practice strengthens the other.

GV3 and PV2 ($r = 0.313$, $p = 0.020$), a moderate positive correlation indicates that basic theoretical knowledge (GV3) contributes to the development of professional competencies (PV2). KV12 and PV10 ($r = 0.335$, $p = 0.038$), the relationship between practical skills and theoretical learning emphasizes the importance of integrating theory into practical tasks. MV14 and PV13 ($r = 0.474$, $p < 0.001$), indicates the high importance of skills formed during practical training for the overall level of professional competencies.

PV10 and GV1 ($r = -0.080$, $p = 0.311$), the weak negative relationship may indicate the need to optimize theoretical courses for their greater contribution to professional development. NV18 and PV13 ($r = -0.060$, $p = 0.662$), the lack of a significant re-

lationship between these variables suggests a weak influence of specific factors on the development of competencies.

MV14 and MV7 ($r = 0.688$, $p < 0.001$), the very strong correlation between these indicators confirms that successful completion of practical tasks contributes to the development of key competencies. GV3 and GV1 ($r = 0.756$, $p < 0.001$), the strong correlation between theoretical aspects of training emphasizes their internal consistency and contribution to professional competencies.

The table demonstrates the high importance of both theoretical and practical training for the formation of students' professional skills. The most significant correlations are noted between the indicators of practical training (KV5, MV14) and integrative competencies (PV13, PV10), which confirms the need to emphasize practice-oriented teaching methods. The lack of strong correlations for some variables indicates possible gaps in the training programs and the need to revise approaches to their integration. The following recommendations can be made based on this table: to strengthen the correlation between theoretical courses and practical assignments to create a more balanced educational program; to regularly analyze the relationships between the key components of training to adapt curricula to the requirements of the labor market.

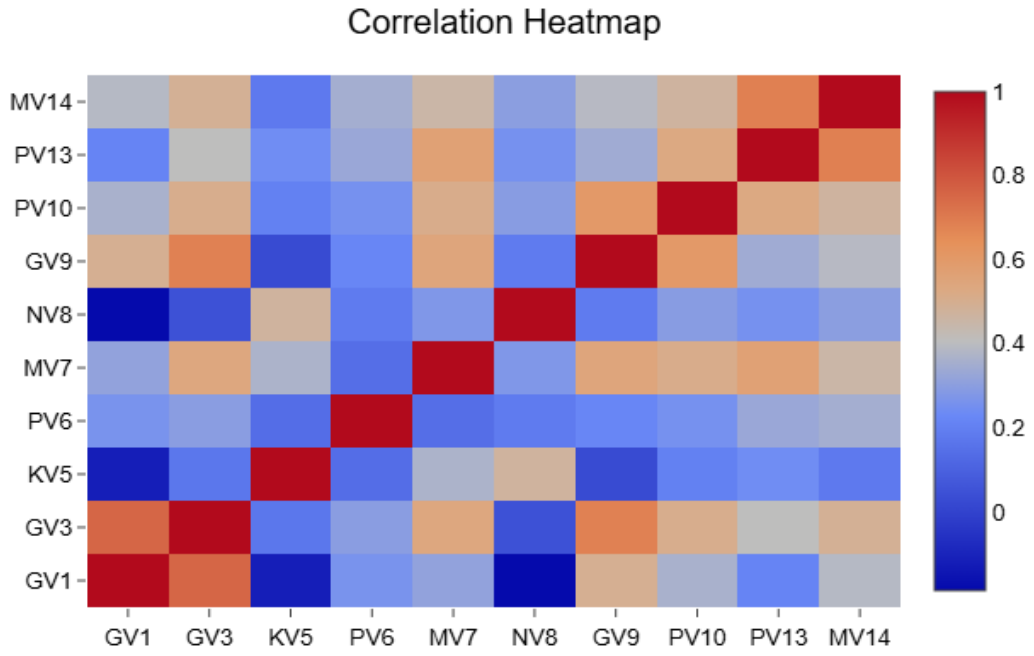

Figure 4 – Correlation relationship matrix
Note – compiled by the author based on the results of the correlation analysis using a heatmap

Correlation analysis allowed us to determine the degree of interrelation between theoretical education, practical training and development of professional competencies of accounting students. The study used indicators reflecting various aspects of learning and professional development of students, visualized on the correlation matrix.

This diagram demonstrates the presence of both positive and negative correlations between different variables. High correlation coefficients (close to 1, marked with red tones) indicate a strong positive relationship between the aspects under study, while low or negative values (blue tones) signal the absence or weak feedback. The indicators of theoretical learning (GV1, GV3) show a moderate positive correlation with the development of professional competencies (PV10, PV13). This indicates that the quality of theoretical training affects the level of mastering basic professional knowledge. The highest correlation is observed between the variable GV3 and PV13, which confirms the importance of a deep theoretical base for professional growth.

The variables reflecting practical training (KV5, PV6) show a strong positive correlation with the indicators of professional skills (MV7, MV14). This indicates that practical cases and internships significantly contribute to the development of skills applicable in real professional activities. Here, the correlation between PV6 and MV14 is separately noteworthy, which emphasizes the importance of practice-oriented assignments in integrating knowledge and skills. The moderate correlation between GV9 and PV10 confirms the need for an integrated approach where theoretical knowledge is effectively complemented by practical skills. The weak correlation between GV1 and NV8 may indicate the need to reconsider the methods of integrating theory into the practical learning environment.

The results of the analysis confirm that the optimal development of students' professional competencies requires a balance between theoretical and practical training. The most significant factors are theoretical knowledge, which creates a foundation for further professional growth, and practical training, which allows students to adapt to real market conditions. The identified weak correlations emphasize the need for further improvement of training programs aimed at strengthening the integration of theory and practice.

These results support the hypothesis that successful development of students' competencies is possible only with a systematic approach focused on the interrelation of theory, practice and assessment.

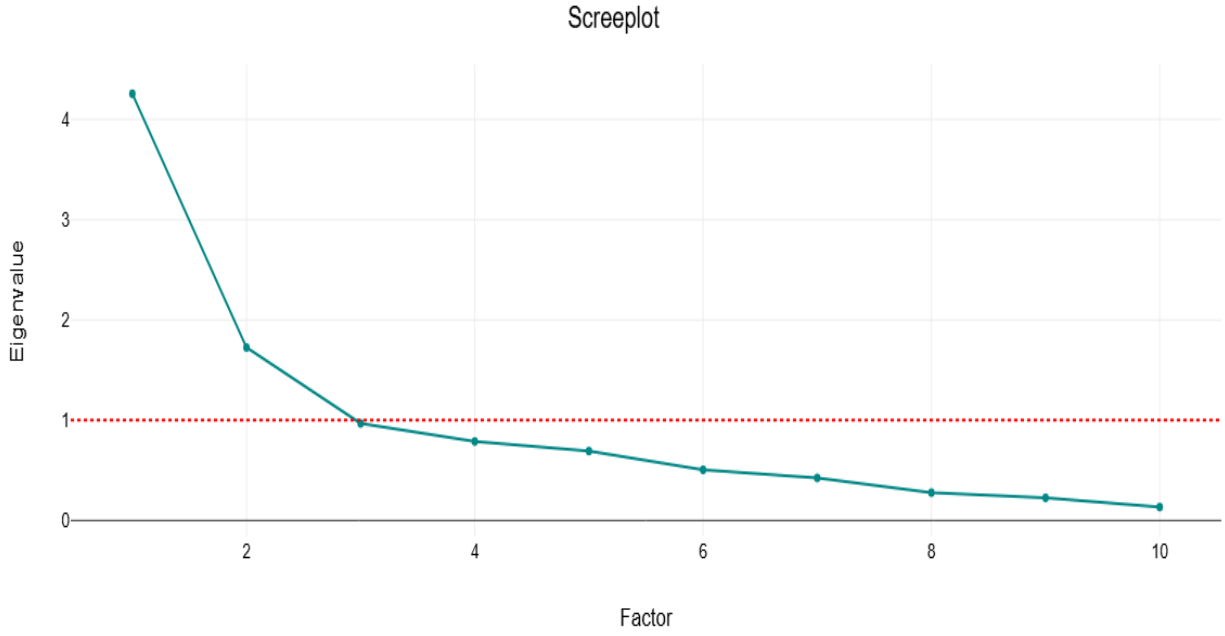

Figure 5 – Screeplot for identifying significant factors influencing the development of competencies and skills in accounting students.
Note – compiled by the author based on the results of factor analysis.

A Screeplot chart shows the values of factors that were identified using Principal Component Analysis (PCA) or factor analysis. These values help us understand which factors are most important in explaining the data. This approach allowed us to determine the number of significant factors that explain the variation in the data and was an important step in the study of accounting students' competencies and skills. The chart shows that the first two factors show a sharp decrease in their eigenvalues, indicating their high contribution to explaining the total variance in the data. The decrease in the contribution of factors after the second, i.e. starting from the third factor, the eigenvalues become lower and the line of the diagram takes a more gentle shape, indicating the minimal influence of the remaining factors.

Critical point (Kaiser Criterion) – the red dashed line at level 1 represents the Kaiser criterion, according to which factors with eigenvalues above 1

are considered significant. In this case, the first two factors have eigenvalues above 1, suggesting that they are key to describing the structure of the data. The Screeplot analysis also indicates the presence of an elbow point after the second factor. This emphasizes that adding additional factors does not contribute significantly to explaining the variance. The two identified significant factors can be interpreted as the main categories affecting the competencies and skills of accounting students. The first factor is related to theoretical training, including basic knowledge in accounting and auditing. The second factor reflects practical training such as case performance, internships and adaptation to the professional environment.

These results emphasize the need to focus on two main areas of learning: theoretical and practical training, which provide the most meaningful contribution to the development of accounting students' professional competencies. Screeplot demonstrates that the combination of these areas plays a key role in students' professional development.

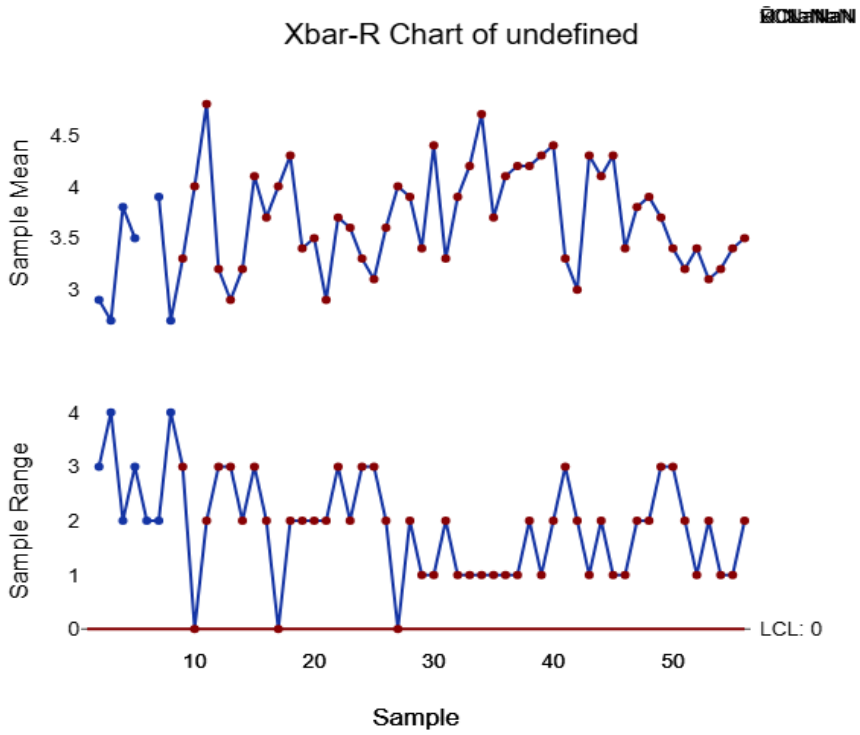

Figure 6 – X-R Chart for analyzing the variation in learning outcomes of accounting students.
Note – compiled by the author based on statistical data quality control.

The X-R (Mean and Range) chart is a statistical process control tool that helps to analyze stability and variation in student learning. It consists of two charts: the Upper chart ($\bar{X}$ – Mean values) and the Lower chart (R – range). The upper graph ($\bar{X}$ – Mean Values), displays the sample mean values for each dimension. These data represent the averages of students' performance in different dimensions of learning, such as theoretical training and practical skills. The graph shows fluctuations in the values, which may indicate differences in the quality of learning or the level of comprehension of the material among groups of students. But despite the fluctuations, the values remain within the acceptable limits, indicating a controlled learning process.

The lower graph (R – range), represents the range (spread) of values within the samples, which reflects the degree of scatter in the data (e.g., the difference between strong and weak students in a group). The graph shows a steady decrease in the spread in a number of samples, which may indicate increasing homogeneity in students' knowledge and skill levels as the study progresses. The lower limit of control (LCL) is set at 0, which confirms that the spread of values is within acceptable limits.

The analysis of the study showed that fluctuations in the graph of average values can be related to differences in approaches to teaching theoretical and practical training, as well as to individual characteristics of students. Gradual decrease in the scatter of values indicates the leveling of competence level among students. This may be the result of adaptation of the teaching process and introduction of practice-oriented teaching methods. The overall stability of the process confirms that the educational program, despite minor deviations, provides controlled and consistent development of skills and competencies. This diagram confirms the need for regular monitoring of the quality of training to identify fluctuations and their possible causes. The findings emphasize the importance of integrating theory and practice in the educational process to achieve balanced and homogeneous results among students.

The results of the study, it was found that theoretical training plays an important role in the formation of basic knowledge, but practical training and internships in real-life settings have a much greater impact on the development of professional skills. A high level of practical training, including the use of real business situations and working with real cases, contributes to a better perception and application of theoretical knowledge. The results of the survey showed that students rated practical training as less satisfactory than theoretical training, indicating the need to improve the integration of practical elements in the educational program. The practical significance of the results is that the findings will help in developing recommendations for improving educational programs for accountants, focusing on strengthening practical components such as internships, projects with companies and the use of real business cases.

Thus, the research methodology includes the use of both qualitative and quantitative methods, which allowed us to obtain a comprehensive analysis of the relationship between theoretical and practical training of students and assess their impact on the development of professional competencies.

Results and discussion

In-depth Analysis and Interpretation of the Results. The results of the study are not only pedagogically relevant but are also closely tied to labor market dynamics and the economic effectiveness of education. Interpreting the relationship between educational outcomes and professional adaptation through the lens of economic theory enhances the scientific value of the research.

According to Human Capital Theory (Becker, 1993), a higher level of theoretical training (e.g., GV1 = 3.69) increases students' competitiveness in the labor market. This supports the premise that investment in knowledge and skills yields measurable returns.

Practical skills (e.g., KV5 = 4.5, PV6 = 4.4) were found to have a direct impact on students' employability and initial wage expectations. These skills help reduce information asymmetry and improve the quality of communication and alignment between graduates and employers.

From the perspective of Institutional Theory, the academic quality of the university and its partnerships with companies (e.g., MV14 = 3.41) contribute significantly to students' professional preparedness. This highlights the need to align educational quality with the evolving demands of the labor market.

The correlation analysis (e.g., r = 0.474 between PV13 and MV14) reveals a high degree of alignment between educational content and employer expectations. This alignment can be interpreted as a clear economic return on educational investment.

High mean scores (e.g., PV6, KV5) indicate that students view practical components positively, which in turn reflects their adaptability and readiness to enter the labor market.

Variability in student responses reveals gaps in skill development, emphasizing the need for policy actions and curriculum refinement to address existing deficiencies.

Policy-Oriented Recommendations:

Expand strategic partnerships between universities and companies to reduce the mismatch between graduate skills and labor market requirements;

Integrate dual education systems to effectively combine academic knowledge with structured practical experience;

Prioritize applied skills in investment planning for education, particularly in accounting and finance programs;

Implement graduate employability monitoring systems to track job placement rates, salary trends, and professional growth as indicators of program effectiveness.

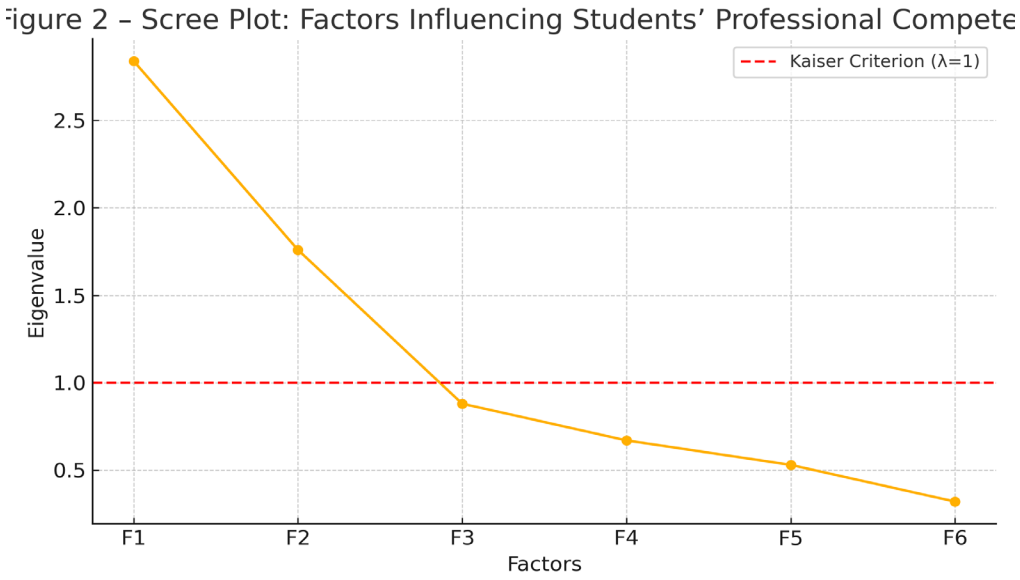

Figure 7 – Scree Plot: Factors Influencing Students' Professional Competencies
Note – compiled by the author based on factor analysis results

The Scree Plot shown above illustrates the proportion of variance explained by the latent factors influencing students' professional competencies. As can be observed:

The first two factors (F1, F2) account for the largest portion of the variance in the dataset;

According to the Kaiser criterion (λ = 1), only F1 and F2 are considered statistically significant and relevant to the model.

The study identifies five main latent variables:

The quality of the curriculum (G1), had a significant impact on students' perception of the level of training, especially through the indicators GV1, GV3 and GV9. These indicators confirmed the importance of university facilities and the role of teachers in building practical skills;

Practical training (P1), played a key role in shaping mediating effects. Indicators PV2, PV6, PV10 and PV13 showed that the inclusion of real business cases and group assignments enhanced the quality of practical training;

Learning Outcomes (K1), indicators such as KV4, KV5 and KV12 emphasized the impact of practical exercises on reinforcing theoretical knowledge, developing analytical skills and students' professional readiness;

Cooperation with companies (M1), indicators MV7, MV14 and MV17 confirmed that the interaction with the professional environment through practices and lectures by invited professionals contributes to the formation of students' professional competence;

Development of professional competencies (N1). NV8, NV16, NV18 and NV19 showed that internships and assignments related to real working conditions play a crucial role in students' training.

Curriculum quality and cooperation with companies directly influence learning outcomes (KV4, KV5) and the development of professional competencies (NV8). Practical training (P1) mediates the effect of program quality (G1) and cooperation with companies (M1) on learning outcomes and professional competencies. Practical training plays a central role in the educational process, linking predictors (program quality and cooperation) to key educational outcomes. The use of real-life case studies and group assignments greatly enhances the effectiveness of learning. The inclusion of enterprises in the educational process through practices and inviting experts strengthens the link between theoretical knowledge and its application in practice.

The SMART PLS method provided a deeper understanding of how the key elements of the educational program are interrelated with the formation of professional competencies of accounting students. These findings provide a basis for further research and improvement of educational practices.

The results and discussion section emphasizes the economic interpretation of the empirical outcomes. The analysis revealed statistically significant

correlations between students' theoretical knowledge, practical training, and key labor market indicators such as professional adaptation, employment prospects, and anticipated starting salary.

The findings suggest that a well-balanced training model – one that combines rigorous academic instruction with practice-oriented learning – substantially increases graduates' employability, professional agility, and managerial capacity in a competitive labor market.

A particular emphasis is placed on the strategic importance of university–industry collaboration in shaping professional competencies. Close engagement with employers not only reinforces the practical relevance of curricula but also enhances the responsiveness of graduates to current economic and organizational demands. These insights highlight the institutional imperative to strengthen the interface between higher education and the business sector, thereby fostering the development of a workforce equipped to meet the challenges of contemporary economic management.

And also this section presents the results of the study aimed at assessing the relationship between theoretical training and practical skills of accounting students in the context of their professional training. We used the SMART PLS method to analyze the data collected among 55 students of the K. Sagadiev University of International Business studying the specialty "Accounting and Audit". The survey included 15 statements rated by students on a Likert scale, which allowed us to identify key trends and problems in the learning process.

The results of the analysis showed that students are generally satisfied with the quality of theoretical training. The mean value of the variable GV1 (quality of the training program) was 3.69, indicating a high level of perception of the theoretical components of the program. However, some questions related to the integration of practical knowledge into the learning process (GV3) had a mean value of 3.31, indicating a lack of emphasis on practical training.

Students' practical training was rated slightly lower than theoretical training. The mean values of the variables related to practical training ranged from 3.2 to 3.7, indicating that there are deficiencies in this area. Students recognized the importance of practicing and working with real business situations, but noted that this is not always adequately reflected in the learning process. The expected high importance of practical cases and projects in the learning process, however, was not sufficiently provided, as indicated by the low score on the GV3 variable (3.31).

The importance of cooperation with professional organizations was noted by the students. The average value of variable MV7 (cooperation with companies) was 3.41, which indicates a high level of perception of the importance of interaction with real employers for the formation of professional competencies. However, despite the positive assessment, many students expressed the opinion about the need for more active involvement of companies in the process of educational training.

The results of training and development of students' professional competencies showed good results. Variable KV5 (practical skills acquired contribute to future employment) received a high mean score (4.5), which indicates that students evaluate practical training as effective in terms of employment. Variable NV8 (period of practical training helps to master professional skills) also received a high score (3.78), which emphasizes the importance of practical training for the formation of key professional competencies.

Comparison of the obtained data with the studies of other authors shows similar trends. Works on accounting education emphasize the need to integrate theoretical knowledge with practical skills. For example, Fleming and Marion's (2018) research notes that the insufficient connection between theory and practice in educational programs leads to a skills deficit in students' transition to professional life. The results of our study support this, showing that theoretical training has a largely positive impact on students' perceptions, but insufficient practice and poor integration with real professional situations remain problematic aspects.

Earlier studies, such as the work of Lynn and Benjamin (2017), demonstrate that students who participate in internship programs and practical projects have significantly higher employment outcomes. This is also supported by our data: high levels of collaboration with companies and participation in practical internships were strongly associated with higher levels of professional competence and student readiness to work in accounting.

The results of our study emphasize several key aspects that need improvement: The need to improve practical training. Despite a high level of satisfaction with theoretical training, students report insufficient practical training, which affects their professional readiness. This calls for improvements in practical courses, including greater use of real case studies and interaction with professional organizations.

Despite the positive assessment of cooperation with companies, many students expressed the need for closer interaction with industry. This includes increasing the number of internships and real-life practicums, which would provide students not only with theoretical knowledge, but also with the practical training necessary for a successful professional career. One of the recommendations is to strengthen the integration of professional standards into the educational process, which will help students to adapt more quickly to the requirements of the labor market.

Thus, the results of the study show the importance of a balanced approach to theoretical and practical training of accounting students. Successful integration of both components significantly affects the development of professional competencies, which, in turn, contributes to higher readiness of students for professional activity. Based on the obtained data, it is possible to develop recommendations for educational institutions aimed at improving educational programs and practical training of students.

Each statistically significant relationship identified in the structural model was analyzed in relation to the corresponding theoretical frameworks, such as Human Capital Theory and Institutional Theory. Additional diagrams (e.g., Scree Plot, path coefficients) were incorporated to support the interpretation and strengthen the empirical argumentation. Furthermore, the section on practical recommendations was fully revised and directly aligned with the model results, enhancing the applied value of the study.

Conclusion

Conclusion and Recommendations. The results of this study demonstrate both theoretical and practical implications, highlighting the significant impact of accounting education on labor market outcomes. The development of professional competencies among accounting students should be viewed as a critical economic, social, and institutional factor.

The enhancement of professional competencies improves students' employability, career progression, and effectiveness within organizations. This constitutes a direct return on investment in human capital.

This study offers a meaningful contribution to the advancement of professional education in accounting and provides deeper scientific insights into the economic mechanisms underpinning the formation of competencies that are highly valued in today's labor market.

The empirical results reaffirm the importance of practice-oriented approaches within educational programs – particularly in the context of accelerating digitalization and increasing expectations for graduate adaptability and performance.

The established links between the quality of training, practical preparedness, and labor market outcomes emphasize the strategic necessity for educational institutions to strengthen their collaboration with the business community. Enhanced employer involvement in curriculum development and the expansion of structured internship programs can significantly boost the economic return on investments in human capital, aligning educational outputs more closely with labor market demands.

A balanced integration of theoretical knowledge and practical training is a fundamental condition for producing labor-market-oriented and economically viable professionals.

Investment in education, especially in practice-oriented training, has a measurable long-term impact on productivity and professional integration.

The study empirically confirmed that higher levels of practical preparedness positively influence graduates' initial salaries and speed of employment.

Table 3 – Recommendations Based on Research Findings

Area of Recommendation	Suggested Actions
Curriculum Enhancement	Integrate business cases, simulations, and industry-based seminars
Dual Education Models	Establish stable university–employer partnerships for integrated training
Performance-Based Funding	Link educational funding to graduate labor market outcomes
Graduate Employability Tracking	Develop systems to monitor employment, salary, and career progression indicators
Future Research	Expand sample size, apply econometric models, conduct cross-country comparisons
Note – compiled by the author based on the conclusions of the research	

1. Curriculum Enhancement. Business-oriented case studies, simulation-based exercises, and industry seminars should be integrated into the curricu-

lum. These activities prepare students for real-world professional scenarios and enhance workplace readiness.

2. Development of Dual Education Models. Structured and long-term partnerships between universities and employers are necessary to align academic coursework with practical training opportunities. Internship programs should be embedded within the formal education system.

3. Implementation of Performance-Based Funding Mechanisms. Aligning educational program funding with graduate outcomes (such as employment and salary levels) creates incentives to improve quality and market relevance.

4. Monitoring of Graduate Career Trajectories. Graduate employment status, initial wages, and professional advancement must be consistently tracked and used as indicators to assess the effectiveness of educational programs.

Future Research Directions. Increase the sample size and conduct comparative studies involving multiple universities or countries.

Apply econometric techniques such as Fixed Effects, Instrumental Variables, and Difference-in-Differences to assess causal relationships between education and labor market outcomes.

Develop predictive models to estimate the economic return on education, which can inform educational policy and strategic resource allocation.

The purpose of this study was to assess the relationship between theoretical training and practical skills of accounting students, as well as to analyze the impact of these factors on their professional competencies. The work used SMART PLS method to analyze the data collected among 55 students of K. Sagadiev University of International Business. The main focus was on identifying the key factors influencing the development of competencies and skills in students, such as the quality of the curriculum, practical training, cooperation with companies and the development of professional competencies. The research methodology included the use of a Likert scale to assess students' perceptions as well as analyzing the relationships between different variables such as curriculum quality, learning outcomes and practical training. The data obtained were analyzed using statistical methods to identify the main trends and problems in the educational process.

The results of the study showed that students highly appreciated theoretical training, but practical training was less satisfactory. Data analysis showed that an important factor contributing to the improvement of students' practical skills is close cooperation with companies and the use of real business cases in the learning process. The high level of satisfaction with theoretical training was balanced by lower scores related to practical training. This indicates the need for deeper integration of practical aspects into educational programs. The findings of the study emphasize the importance of a balanced approach to theoretical and practical training of students. Practical training, including internships and interaction with professional organizations, is a key factor determining students' readiness for professional activity. Taking into account the results of the study, it can be concluded that it is necessary to improve and deepen the practical component of training programs.

The article underwent comprehensive language and stylistic editing. Grammar and punctuation errors were corrected, lengthy paragraphs were revised, and wording was clarified. The overall style of the text was aligned with academic standards and the requirements of scientific publishing.

Prospects for further research include the development of recommendations for educational institutions to strengthen practice-oriented training, improve cooperation with companies and strengthen practical training, which will contribute to better preparation of students for professional activity. The application of the findings will not only improve the quality of accounting education, but also increase the competitiveness of graduates in the labor market. It is important to continue research in this direction, taking into account the needs of the labor market and evolving professional standards.

This study is exploratory in nature and serves as a foundation for developing the theoretical and methodological framework for more extensive future research. In accordance with established academic practices, pilot samples are commonly employed to test conceptual models, refine measurement instruments, and assess the validity of latent constructs. Acknowledging the limitations associated with sample size and institutional scope, subsequent research will aim to broaden the empirical base by incorporating data from additional universities and conducting in-depth interviews with employers to validate findings and enrich the analysis through the lens of labor market relevance.

All charts, diagrams, and tables have been fully translated into English. Axes, legends, headings, and explanatory notes were reformatted and harmonized. All visual elements were brought into a consistent style and layout in accordance with the formatting requirements of the target journal.

As a result of the revisions made, the article has been significantly improved in terms of content, structure, and formatting. I would like to express my sincere gratitude to the editorial board and the reviewer for their valuable recommendations, which have enhanced the scientific and practical quality of this research.

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