CURRENT STATE AND EXISTING PROBLEMS IN FORMING STUDENTS' PRACTICAL-ANALYTICAL COMPETENCIES IN TEACHING ECONOMETRICS

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Abstract: *This article analyzes the current state and existing methodological and pedagogical problems in the formation of students' practical-analytical competencies in teaching econometrics. The study examines the instructional and methodological support of econometrics, regression analysis, work with empirical data, the use of statistical software tools, and competency-based teaching approaches. In addition, gaps between theoretical knowledge and practical application, insufficient development of causal reasoning, shortcomings in assessment systems, and issues related to teachers' methodological readiness are identified. The article also proposes pedagogical recommendations aimed at improving econometrics teaching based on a competency-oriented approach.*

Keywords: *econometrics, practical-analytical competence, regression analysis, competency-based approach, empirical analysis, causal reasoning, statistical software, pedagogical technologies, interactive methods, econometric modeling, digital learning resources, scientific research.*

Introduction. Today, econometrics is taught in higher education institutions of Uzbekistan as one of the fundamental courses in economics-related programs. This discipline is considered an important scientific field that enables the analysis of economic phenomena and processes using statistical and

mathematical methods. Through econometrics, relationships between economic indicators are identified, forecasting is conducted, and economic decisions are made on a scientific basis.

In modern higher education, mastering theoretical knowledge alone is no longer sufficient; the formation of practical-analytical competencies has become an important pedagogical objective. A competency-based approach implies the development of students' ability to apply theoretical knowledge to real economic problems, analyze data, construct models, and interpret results in a justified manner.

However, analysis of econometrics teaching practice shows that theoretical content still dominates the learning process. Empirical analysis, work with real data, the use of statistical software tools, and independent research activities are not sufficiently integrated. As a result, students' practical-analytical competencies are not fully developed. Therefore, it is essential to scientifically and pedagogically analyze the current situation and existing problems in teaching econometrics.

Current State of Teaching Econometrics

In recent years, textbooks and teaching materials on econometrics have focused on explaining regression theory, parameter estimation methods, statistical tests, and classification of econometric models. In particular, linear and multiple regression, time series analysis, and hypothesis testing methods are systematically presented.

However, analysis of these materials shows that methodologies for conducting independent empirical research based on real economic data are not sufficiently developed. Students often perform calculations using predefined formulas, while stages such as data collection, model selection, model diagnostics, and economic interpretation of results remain limited.

Practical classes are mainly focused on computational exercises, while problem-based tasks, analytical assignments, and real research elements are

rarely included. This limits the development of students' critical and analytical thinking skills.

Problems in Developing Practical-Analytical Competencies

Gap Between Theory and Practice

One of the main problems in teaching econometrics is the gap between theoretical knowledge and empirical application. While regression formulas, statistical criteria, and theoretical concepts are thoroughly studied, their application in real economic situations is insufficiently organized.

According to a competency-based approach, the learning process should follow this sequence:

knowledge → application → analysis → evaluation → decision-making

In practice, however, the process often stops at the stage of "knowledge → calculation".

Limited Work with Real Data

An important component of practical-analytical competence is the ability to work with real datasets. However, in many classes, economic data are presented in simplified tabular forms. Students have limited experience working with national statistics databases, international economic databases, or open dataset platforms.

As a result, regression models are calculated technically, but are not deeply analyzed as tools for economic decision-making.

Weak Formation of Causal Reasoning

One of the key tasks of econometrics is to identify causal relationships between economic phenomena. However, in practice, regression models are often treated as mechanical computational tools.

Students often fail to fully understand:

- the difference between correlation and causality;
- the economic meaning of model specification;

- elements of empirical research design;
- the process of hypothesis justification.

As a result, statistical results are not fully linked to economic decision-making.

Pedagogical Factors and Methodological Issues

Implementing a competency-based approach requires reconsidering all components of the educational process. The teacher should act not only as a knowledge provider but also as a facilitator and organizer of learning activities.

However, the following problems are observed in practice:

- insufficient use of interactive methods;
- weak implementation of project-based learning;
- lack of systematic use of statistical software;
- limited reflection and analytical discussion;
- assessment focused mainly on tests and standard calculations.

From an activity-based learning perspective, students should:

- select data;
- build models;
- analyze results;
- improve models;
- justify decisions.

In practice, however, predefined algorithms still dominate.

Current State Analysis of Econometrics Teaching

Table 1. Current Situation in Teaching Econometrics

Area	Current Status	Problem Nature
Theoretical content	Widely covered	Weak integration with practice
Practical tasks	Calculation-oriented	Lack of problem-based tasks
Software usage	Occasional	Not systematic

Model diagnostics	Theoretical explanation	Weak practical skills
Assessment system	Tests and written exams	Lack of empirical projects

Teaching Approaches: Traditional vs Competency-Based

Table 2. Comparison of Teaching Approaches

Criteria	**Traditional Approach**	**Competency-Based Approach**
Objective	Explaining content	Developing competencies
Lesson design	Content-centered	Activity- and outcome-centered
Student role	Passive listener	Active participant
Methods	Lecture and standard problems	Interactive and problem-based methods
Assessment	Theoretical knowledge	Analytical performance

Importance of Problem-Based and Experiential Learning

According to the experiential learning theory, knowledge is formed through practical experience. Therefore, students should be actively involved in solving real economic problems.

Problem-based learning enables students to:

1. identify economic problems independently;
2. work with data;
3. build regression models;
4. perform model diagnostics;
5. interpret results economically;
6. develop decision-making skills.

However, in practice, teaching is often limited to ready-made examples and formula explanations. As a result, students do not fully experience the model-building process.

Conclusion

The study shows that theoretical content still dominates econometrics teaching, while practical and empirical activities are not sufficiently integrated. There are significant issues in developing students' practical-analytical competencies, including limited work with real data, insufficient use of statistical software, weak development of causal reasoning, and limited use of interactive methods.

In addition, assessment systems are mainly focused on theoretical knowledge, and empirical project work is not adequately evaluated, which reduces the effectiveness of competency-based education.

To address these issues, it is necessary to:

1. teach econometrics using real datasets;
2. systematically apply statistical software tools;
3. widely implement problem-based and project-based learning;
4. teach empirical research design;
5. strengthen reflection and analytical discussion.

As a result, econometrics teaching can evolve from a purely theoretical course into an integrated pedagogical system combining theory, practice, and research.

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