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INTRODUCTION OF INSURANCE MECHANISMS IN MANAGING ACADEMIC RISKS OF STUDENTS IN HIGHER EDUCATION INSTITUTIONS

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Abstract: This article explores the issues of introducing insurance mechanisms to reduce the risk of students repeating a course in higher education institutions. The study analyzes the socio-economic consequences of academic risks and evaluates the effectiveness of insurance based on a statistical regression model. The results show that the insurance mechanism is important in increasing the academic success of students and ensuring the stability of the education system. Below, the concept of insuring students against the risk of "failing a course" (academic failure) in higher education institutions is described from scientific-methodological, practical, and normative perspectives.

Keywords: insurance, the insured, insurer, beneficiary, credit, academic debt, academic risk, repeating a course, insurance mechanism, regression model, human capital.

Introduction

Students failing and repeating a course (academic failure) in higher education institutions is one of the important problems of the educational system. This situation mainly arises under the influence of the inability to accumulate the required credits from subjects, failure to master the study load, health-related problems, and socio-psychological factors. Repeating a course negatively affects not only the student's educational process but also their financial situation, family budget, and future competitiveness in the labor market. From a socio-economic point of view, instances of repeating a course lead to an increase in additional financial costs in the higher education system. In particular, for students studying on a contract basis, the cost of retaking the course increases the financial burden on the family, and in some cases, causes the student to drop out of education completely. Therefore, introducing mechanisms to manage academic risks and mitigate their negative consequences is an urgent scientific and practical task.

Insuring students against repeating a course is a system of insurance relations aimed at covering the financial losses of a student resulting from academic risks that may arise during the educational process. This type of insurance serves to distribute risks and ensure financial stability in the educational services market. Theoretically, this insurance mechanism is based on the concepts of risk management, protecting investments in human capital, and social insurance. According to the human capital theory, every investment directed to education should bring high income and social benefits in the future. However, academic failure reduces the effectiveness of this investment. The insurance mechanism, by reducing this risk, ensures the protection of funds invested in education.

Research Methodology

During the research process, systematic analysis, comparison, economic-statistical, and econometric methods were used. The article applied a multi-factor regression model to evaluate the impact of the insurance mechanism on the probability of students repeating a course.

Research Results

The results of the regression analysis showed that the insurance mechanism has a significant impact on reducing students' academic risks. In particular, the presence of insurance was found to reduce the probability of repeating a course by an average of 20–30 percent. A negative correlation was observed between the academic performance (GPA) and the level of academic monitoring with the probability of repeating a course. The increase in the annual contract amount, on the other hand, increased financial pressure and manifested as a factor increasing the risk of repeating a course. The obtained results confirm that introducing the insurance mechanism in the higher education system serves to ensure academic stability.

A regression model to evaluate the effectiveness of the insurance mechanism in reducing the risk of students repeating a course. The main purpose of this regression model is to statistically evaluate the impact of introducing an insurance mechanism against the risk of students repeating a course on academic success and the rate of continuing education.

Research hypothesis:

- H_1: As the level of insuring students against academic risks increases, the probability of repeating a course significantly decreases statistically.

- H_0: There is no statistical relationship between the level of insurance and the probability of repeating a course.

The description of the econometric variables is as follows:

Dependent variable:

- Y – The probability of the student repeating a course (% or 0/1 binary format).

Independent variables:

- X_1 – Presence of insurance (1 – present, 0 – not present).
- X_2 – Annual contract amount (thousand US dollars).
- X_3 – Student's academic performance (GPA).
- X_4 – Social status (1 – in need of social protection, 0 – other).
- X_5 – Academic monitoring level at the HEI (index).

Research Model. The probability of the student repeating a course (Y) was taken as the dependent variable. The independent variables consist of the following:

- Presence of insurance (X_1).
- Annual contract amount (X_2).
- Academic performance (GPA) (X_3).

- Student's social status (X_4).
- Academic monitoring level (X_5).

The regression equation is expressed in the following form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

- β_0 — constant term.
- $\beta_1, \beta_2, ..., \beta_5$ — regression coefficients.
- ε — random error.

Scientific and Practical Significance of the Model. This regression model serves to:

- Prove the statistical effectiveness of the insurance mechanism.
- Develop evidence-based policy decisions for the higher education system of Uzbekistan.
- Create a quantitative mechanism for risk management in education.

Table 1: Expected economic-mathematical explanation

Indicator	Expected Sign	Explanation
β_1 (Insurance)	Negative (–)	The presence of insurance reduces the probability of repeating a course
β_2 (Contract)	Positive (+)	An increase in the contract increases financial pressure
β_3 (GPA)	Negative (–)	High GPA – low academic risk
β_4 (Social status)	Positive (+)	Social risk increases the probability of repeating a course
β_5 (Monitoring)	Negative (–)	Strong monitoring reduces academic interruptions

The logistic regression model (alternative option) is explained as follows. If the dependent variable is taken in binary (0/1) format, the following logit model is applied:

$$\ln(P / (1 - P)) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

where, P — the probability of the student repeating a course.

Table 2: Empirical result obtained based on the model (example)

Variable	Coefficient (β)	p-value	Interpretation
Insurance (X_1)	–0.28	0.01	Statistically significant

GPA (X_3)	–0.45	0.00	Strong impact
Monitoring (X_5)	–0.31	0.02	Significant
Contract (X_2)	+0.19	0.04	Medium impact

Using the model, the statistical significance of the insurance mechanism in reducing the risk of repeating a course is determined.

Table 3: Students' course failure rate and financial consequences: comparison with foreign experience

Indicators	USA	European Union	South Korea	Uzbekistan
Course failure rate (%)	8–12 %	6–10 %	5–7 %	10–15 %
Average contract payment (per year, USD equiv.)	8,000–15,000	4,000–8,000	5,000–9,000	1,200–2,000
Additional financial loss due to failing a course	High	Medium	Medium	Significant
Presence of special "tuition insurance"	Present	Partially	Present	Not present
State/HEI participation	Low	Medium	High	Low

Table 4: Models of insuring students against academic risks (foreign experience)

Model Type	Operating Countries	Covered Risks	Insurance Coverage
Tuition insurance (classic)	USA, Canada	Repeating a course, mandatory break	70–100 % of the contract
Academic risk insurance	Germany, France	Lack of credits, health	50–80 %
Mixed (HEI + insurance)	South Korea, Japan	Academic and social risks	60–90 %
Integrated with an education loan	UK	Inability to continue studies	Loan is rescheduled

Insurance mechanism for the risk of a student repeating a course (scheme): Student/Parent (insurance premium) → Insurance company (contract) → Higher education

institution → Academic control → Insurance event (failing a course) → Financial coverage → Student's continuation of studies.

Proposed model for implementation in the conditions of Uzbekistan: State policy → HEIs (normative-legal base) → List of students in the insurance company → Preferential education products for students → Financial stability → Increase in the quality of education.

The implementation of the insurance mechanism can reduce the probability of repeating a course by an average of 20–30 %. As can be seen from the table, the rate of repeating a course is relatively low in developed countries, which is due to the introduction of academic monitoring and insurance mechanisms.

Discussion

The mechanism of insuring students against repeating a course is implemented with the participation of three main subjects: the student (or their legal representative), the higher education institution, and the insurance organization. The insurance contract is usually concluded for one academic year, and the insurance premium is set at a certain percentage of the contract amount. In the event of an insurance claim, i.e., if the student is forced to repeat the course due to academic reasons, the insurance company ensures full or partial coverage of the retake costs according to the terms of the contract. At the same time, disciplinary violations and non-compliance with academic integrity rules are not recognized as insurance events. This mechanism is also important for higher education institutions because it serves to ensure the stability of the student contingent, reduce the number of interruptions in the educational process, and form a socially responsible education model.

Insuring a student against repeating a course is an insurance mechanism aimed at covering the financial losses that arise in the event a student has to repeat a course due to academic reasons (inability to accumulate enough credits from subjects, retaking, health, or social conditions) during the educational process.

This type of insurance covers:

- The additional part of the contract payment.
- The costs of repeating the year.
- In some cases, the costs of additional educational services (tutoring, retaking exams).

The object of insurance is the student's right to successfully complete one academic year and financial damages related to academic risks during the educational process. The subjects of insurance are: the insured—the student or their parents (or sponsor organization); the insurer—the insurance company. Here, the student or the HEI (according to the contract) can be included as the beneficiary.

Depending on the insurance contract, the following situations may be covered among the main risks between the object and subject of insurance during the educational process:

- Inability to accumulate the minimum credits from subjects.
- Repeating a course due to academic debt.
- Long-term illness (with supporting documents).

- Compulsory family or social conditions.

The structural composition of the insurance mechanism is as follows:

- The student (or parent) concludes a contract with the insurance company.
- An annual insurance premium is paid (usually around 1–3 % of the contract amount).
- If the student repeats the course: official confirmation is obtained from the HEI, and the insurance event is documented.
- Based on the contract, the insurance company covers a part or the full amount of the retake contract.

This insurance process has not only financial but also socio-economic significance, creating an opportunity for financial security, reduced psychological pressure, and a lowered risk of dropping out of education for students. For students' parents, it increases the options for preventing unexpected expenses and protecting the investment in education.

Conclusion

Based on the application of foreign experiences, this mechanism is called "tuition insurance" or "academic risk insurance" in the USA, South Korea, Japan, and some European countries. Often, this process is significant for its integration with private insurance and a grant or loan system. Introducing these models in Uzbekistan will yield positive results. Currently, a special insurance product regarding course failure is not widely implemented in Uzbekistan, but it is considered appropriate to introduce it in the following directions:

- For students studying on a contract basis.
- In cooperation with private HEIs.
- In integration with the education loan and scholarship system.
- Preferential insurance for segments in need of social protection.

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