

**Санкт-Петербургский филиал федерального государственного
автономного образовательного учреждения высшего образования
"Национальный исследовательский университет
"Высшая школа экономики"**

Факультет Санкт-петербургская школа экономики и менеджмента
Департамент менеджмента

**Рабочая программа дисциплины
Эконометрика II**

для образовательной программы «Менеджмент»
направления подготовки 38.03.02 «Менеджмент»
уровень – бакалавриат, 3 курс

Разработчик(и) программы:

Александрова Е. А.

Заздравных Е. А.

Согласована начальником ОСУП

« ____ » _____ 2019 г.

_____ [подпись]

Утверждена Академическим советом образовательной программы

« ____ » _____ 2019 г., № протокола _____

Академический руководитель образовательной программы

_____ [подпись]

Санкт-Петербург, 2019

*Настоящая программа не может быть использована другими подразделениями
университета и другими вузами без разрешения кафедры-разработчика программы.*

Аннотация

Название дисциплины	Эконометрика II		
Образовательная программа	Международный бизнес и менеджмент		
Тип дисциплины	Обязательная		
Требования к уровню знаний студентов, необходимых для освоения дисциплины (пререквизиты)	Владение курсом Эконометрика I, теория вероятностей, статистика		
Объем з.е.	4		
Объем в часах	Аудиторная работа	Самостоятельная работа	Всего
	78	74	152
Краткое описание курса	<p>Данная дисциплина обучает студентов основам эконометрики, применяемых в экономике и менеджменте. Материалы курса ориентированы на решение прикладных задач, среди которых, рассматриваются проблемы постановки исследовательского вопроса, подбора прокси переменных и поиска подходящей эконометрической модели. В курс включены как линейные модели, так и модели дискретного выбора, являющиеся наиболее популярными в исследованиях в экономике и менеджменте. Рассматриваемые методы часто используются в курсовых и выпускных квалификационных работах, а также в академических исследованиях. Таким образом, курс представляет собой сбалансированное изучение прикладных и теоретических аспектов эконометрики, которые необходимы для исследовательской деятельности на базовом уровне.</p>		
Образовательные результаты по дисциплине	<p>Успешное прохождение курса позволит студентам:</p> <ol style="list-style-type: none"> 1. Формализовать исследовательский вопрос в виде эконометрической модели, тестировать и анализировать эконометрическую модель; 2. Собирать, обрабатывать и анализировать данные; 3. Интерпретировать результаты статистического и эконометрического анализа; 4. Идентифицировать ограничения методов; 5. Проверять ключевые классические предположения методов эконометрического моделирования; 6. Осуществлять диагностику ключевых статистик посредством программных продуктов. 		
Краткое содержание дисциплины	<ol style="list-style-type: none"> 1. Введение: выполнение эмпирического исследования; 2. Регрессионный анализ пространственных данных; 3. Регрессионный анализ временных рядов; 4. Продвинутое темы 		
Образовательные технологии	<p>— Лекции — Практические занятия</p>		

	<p>—Домашние работы —Самостоятельная работа —Тесты и лабораторная работа</p>
Формы контроля	<p>Итоговая оценка=$0.25*\text{Тест \#1}+0.25*\text{Тест \#2}+0.25*\text{Тест \#3}+0.25*\text{Лабораторная работа}$</p> <p>Оценка за лабораторную работу является блокирующей. Если студент сдает экзамен на балл, меньший чем 3,5 (из 10 возможных), финальная оценка за курс будет равна оценке за экзамен.</p> <p>«Автоматы» не предусмотрены. Ни одна из промежуточных оценок не округляется. Округляется только последняя итоговая оценка простым арифметическим округлением.</p>
Литература	<p><u>Основная</u></p> <ol style="list-style-type: none"> 1. Stock H. J., Watson M. W. Introduction to Econometrics, Global Edition / Stock H. J., Watson M. W.- 3rd ed. Edinburgh: Pearson Education Limited [https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=5174962&query=Econometrics] 2. Wooldridge, J.M. Introductory Econometrics: a Modern Approach / J.M.Wooldridge. – 2015 – 6th ed. – Boston : Cengage 2. Gujarati, D. N. (2009). <i>Basic econometrics</i>. Tata McGraw-Hill Education. <p><u>Дополнительная</u></p> <ol style="list-style-type: none"> 3. Adkins, L. C. , Hill, R. C. . Using Stata for principles of econometrics / L. C. Adkins, R. C. Hill. – 3rd ed. – Hoboken: John Wiley & Sons, 2008. – 459 с. 4. Cameron, A. C., & Trivedi, P. K. (2009). Microeconometrics using stata. Indicator, 2, 47. 5. Baum, C. F., & Christopher, F. (2006). An introduction to modern econometrics using Stata. Stata press.
Преподаватель	к.э.н., доцент департамента экономики ШЭМ Александрова Екатерина Александрова

Course Syllabus

Title of the Course	Econometrics II				
Title of the Academic Programme	International Business and Management				
Type of the Course	Mandatory				
Prerequisites	Econometrics I; Statistics; Probability Theory				
ECTS Workload	4				
Total indicative study hours	Directed Study	Self-Directed Study	Total		
	78	74	152		
Course Overview	<p>This course provides students with skills in basic econometrics analysis for management studies. It covers applied issues, such as the development of the research question, finding proxy variables, and adjusting an appropriate econometrics model. In addition, the course covers the theoretical aspect of linear and discrete choice models. These models are the most popular ones in econometrics analysis for management studies, and they are frequently used for empirical term papers and bachelor theses. In sum, the course provides a balanced study of applied and theoretical aspects of econometrics, all of which are necessary for basic econometric analysis.</p>				
Intended Learning Outcomes (ILO)	<p>Upon successful completion of this unit, the students will be able to:</p> <ol style="list-style-type: none"> 1. Construct, test, and analyse econometric models, using variables and relationships commonly found in the studies of economic and management theory; 2. Collect, organise, and analyse data, as well as interpret results from statistical analyses; 3. Identify the desirable properties of estimators; 4. Identify key classical assumptions in the field of econometrics, explain the significance of these assumptions, and describe the effects that violations of the classical assumptions can have; 5. Interpret key statistics and diagnostics typically generated by software. 				
Teaching and Learning Methods	<ul style="list-style-type: none"> — Lectures and seminar discussions; — Self-learning; — Home assignments; — Tests and Lab works. 				
Content and Structure of the Course					
№	Topic / Course Chapter	Total	Directed Study		Self-Directed Study
			Lectures	Tutorials	
1	Introduction: Doing an Empirical Project	6	2	2	2

2	Regression Analysis with Cross-Sectional Data	46	10	10	26
3	Regression Analysis with Time Series Data	16	4	4	8
4	Advanced Topics	84	22	24	38
Total study hours		152	38	40	74
Indicative Assessment Methods and Strategy	<p>Final mark=0.25*Test #1+0.25*Test #2+0.25*Test #3 +0.25* Lab work</p> <p>The final practical task (Lab work) has a blocking grade; this means that such a work absolutely must be done; the weight of the grade for this task will not be redistributed between the weights of the other grades in any way. A failing grade for the final practical task is considered equivalent to the failing of the entire course.</p> <p>The final practical task is considered failed if the grade received for it is lower than 3.5 points out of 10. None of the preliminary grades are rounded up. Only the final grade is rounded up by means of simple arithmetic rounding.</p>				
Readings / Indicative Learning Resources	<p><u>Mandatory</u></p> <ol style="list-style-type: none"> 1. Stock H. J., Watson M. W. Introduction to Econometrics, Global Edition / Stock H. J., Watson M. W.- 3rd ed. Edinburgh: Pearson Education Limited [https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=5174962&query=Econometrics] 2. Wooldridge, J.M. Introductory Econometrics: a Modern Approach / J.M.Wooldridge. – 2015 – 6th ed. – Boston : Cengage 6. Gujarati, D. N. (2009). <i>Basic econometrics</i>. Tata McGraw-Hill Education. <p><u>Optional</u></p> <ol style="list-style-type: none"> 7. Adkins, L. C. , Hill, R. C. . Using Stata for principles of econometrics / L. C. Adkins, R. C. Hill. – 3rd ed. – Hoboken: John Wiley & Sons, 2008. – 459 c. 8. Cameron, A. C., & Trivedi, P. K. (2009). Microeconometrics using stata. Indicator, 2, 47. 9. Baum, C. F., & Christopher, F. (2006). An introduction to modern econometrics using Stata. Stata press. 				
Indicative Self-Study Strategies	Type		+/-	Hours	
	Reading for seminars / (lecture materials, textbooks, mandatory and optional resources)		+	40	
	Assignments for seminars / labs		+	26	
	Preparation for the exam		+	8	

Academic Support for the Course	Academic support for the course is provided via the LMS, where students can find: guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials.
Facilities, Equipment and Software	Computer class with STATA
Course Instructor	Associate Professor Ekaterina A. Aleksandrova

Intended Learning Outcomes (ILO) Delivery

Programme ILO(s)	Course ILO(s)	Teaching and Learning Methods for delivering ILO(s)	Indicative Assessment Methods of Delivered ILO(s)
The ability to participate in the development of the marketing strategy of an organization, and in the planning, designing, and conducting of events	The ability to participate in the development of the marketing strategy of an organization, and in the planning, designing, and conducting of events	Lectures, seminars	Essays, lab work, tests
The ability to plan the operational activities of an organization	The ability to plan the operational activities of an organization	Lectures, seminars	Essays, lab work, tests
The ability to analyze the behavior of consumers of goods and the formation of demand	The ability to analyze the behavior of consumers of goods and the formation of demand	Lectures, seminars	Essays, lab work, tests
The ability to conduct analyses of the operational activities of firms for preparing managerial decisions	The ability to conduct analyses of the operational activities of firms for preparing managerial decisions	Lectures, seminars	Essays, lab work, tests

Course Content

- 1. Introduction: Carrying Out an Empirical Project**
Review of Probability. Review of Statistics. Association and Causation. Descriptive statistics and hypotheses tests. Econometric reports.
- 2. Regression Analysis with Cross-Sectional Data**
Simple Regression Model. Multiple Regression Model: estimation; inference; OLS asymptotics; binary variable model. Heteroskedasticity. Model Specification and Data Issues.
- 3. Regression Analysis with Time Series Data**
Basic regression analysis with time series data. Further issues in using OLS with Time Series Data. Serial correlation and heteroskedasticity in time series regressions.
- 4. Advanced topics**

Pooling cross-section series. Panel Data Models. Instrumental Variable estimation. Simultaneous Equation Model. Limited dependent variable model and sample selection. Advanced time series topics.

Assessment Methods and Criteria

Assessment Methods

Types of Assessment	Forms of Assessment	Modules	
		1	2
Formative Assessment	Test (output interpretation)	**	
	Test		*
Summative Assessment	Lab work		*

Assessment Criteria

Essays and Lab work are evaluated subjectively by the faculty. If the student disagrees with the grade, he or she will have to write a detailed report about the reasons for disagreeing with the grade. In this report, he or she has to prove, using **appropriate references** to the textbook/lecture notes¹, that the mark is incorrect (too low/too high).

Test

Grades	Assessment Criteria
"Excellent" (8-10)	The Student interprets descriptive statistics, statistical tests, and distribution correctly (in accordance with the information given in the lectures and in the main econometrics textbooks). In addition, the student interprets outputs correctly (in accordance with the information given in the lectures and in the main econometrics textbooks). The interpretation covers beta coefficients and their statistical significance, the overall quality of the model, and its statistical significance.
"Good" (6-7)	The student provides an interpretation with minor mistakes for the descriptive statistics (or statistical tests) or regression outputs.
"Satisfactory" (4-5)	The student provides an interpretation with mistakes for the descriptive statistics (or statistical tests) and regression outputs.
"Fail" (1-3)	Student did not provide the correct interpretation for the descriptive statistics or regression outputs. There is no discussion or the limitations part.

¹ Only our lecture notes in econometrics will be considered. Only the textbooks designated for this course will be considered.

"Fail" (0)	The essay was not submitted in time. The student broke assessment rules during the formative assessment procedure. There is plagiarism. The student does not write his or her first and the second names, group number, nor puts his or her signature on the work.
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Lab Work

Grades	Assessment Criteria
"Excellent" (8-10)	<p>The student has to find the correct dependent variable(s), variable(s) of interest, and control variables. There is the correct robustness check using different proxy variables. All the estimations are correct. There are descriptive statistics with statistical tests (if necessary); there is a table with outputs. The style of all the tables follows the academic standards, and it has all the necessary information about the overall quality of the model and its coefficients.</p> <p>The student interprets descriptive statistics, the statistical test, and the distribution correctly (in accordance with the information given in the lectures and the main econometrics textbooks). In addition, the student interprets the outputs correctly (in accordance with the information given in the lectures and in the main econometrics textbooks). The interpretation covers beta coefficients and their statistical significance, the overall quality of the model, and its statistical significance.</p>
«Good» (6-7)	<p>— The student finds the correct dependent variable(s), variable(s) of interest, and control variables. The correct econometrics model is used, as well as a robustness check, using different proxy variables. All the estimations are correct. There are descriptive statistics with statistical tests (if necessary); there is a table with the outputs. The style of all the tables follows the academic standards, and it has all the necessary information about the overall quality of the model and its coefficients.</p> <p>However, there are minor mistakes in the interpretation of the descriptive statistics, the statistical test, the distribution (if required), the regression models.</p> <p>OR</p> <p>The student finds the correct dependent variable(s), variable(s) of interest, and the control variables. However, there are minor mistakes in the regression model, and/or the robustness check. There are descriptive statistics with statistical tests (if necessary); there is a table with outputs. The style of all the tables follows the academic standards, and it has all the necessary information about the overall quality of the model and its coefficients.</p> <p>The student interprets the descriptive statistics, the statistical test, the distribution correctly (in accordance with the information given in the lectures and in the main econometrics textbooks). In addition, the student interprets the outputs i correctly (in accordance with the information given in the lectures and in the main econometrics textbooks). The interpretation covers beta coefficients and their statistical significance, the overall quality of the model and its statistical significance.</p>
"Satisfactory" (4-5)	The student misses an important part of the lab work or makes an incorrect interpretation for the whole part. The important parts are the descriptive statistics, the regression models, the robustness check, an interpretation of the descriptive statistics and the regression results.
"Fail" (1-3)	There is no correct set of the dependent variable, the variable of interest, the control variables. There are no correct regression models or a robustness check. There is no correct interpretation part.
"Fail" (0)	The essay was not submitted in time. The student breaks the assessment rules during the formative assessment procedure. There is plagiarism. The student does not write his or her first and second names, his or her group number, nor puts his signature on the work.

Recommendations for students about the organization of self-study

Self-study is organized in order to:

- Systemize the theoretical knowledge received at the lectures;
- Extend one's theoretical knowledge;
- Learn how to use legal, regulatory, referential information, and professional literature;
- Develop one's cognitive and soft skills, namely creativity and self-sufficiency;
- Enhance one's critical thinking and personal development skills;
- Develop research skills;
- Obtain the skills necessary for doing one's independent professional activities efficiently.

Self-study, which is not included in the course syllabus but is aimed at extending one's knowledge about the subject, is up to the student's own initiative. The teacher recommends relevant resources for self-study, defines relevant methods for self-study, and mentions students' past experiences. Tasks for self-study and its content can vary depending on the individual characteristics of the student. Self-study can be arranged individually or in groups, both offline and online, depending on the objectives, topics, and the degree of difficulty. Assessment of self-study is made in the framework of the teaching workload for seminars or tests.

In order to show the results of one's self-study, it is recommended to:

- Make a plan for 3-5 presentations that will include the topic of how one's self-study was organized, its main conclusions and suggestions, and its rationale and importance.
- Supply the presentation with illustrations.

Recommendations for lab work

An essay is a written piece of self-study on a topic offered by the teacher or chosen by the student himself or herself and approved by the teacher. The topic for the essay includes the development of skills necessary for critical thinking and a written argumentation of ideas. The essay should include a clear statement of a research problem; it must also have an analysis of the problem, shown by the use of concepts and analytical tools within the subject that outline the author's point of view.

Essay structure:

1. *Introduction and formulation of a research question.*
2. *Body of the essay* and a theoretical foundation of the selected problem and an argumentation of the research question.
3. *Conclusion* and an argumentative summary about the research question and the possibilities for its further use or development.

Special conditions for the organization of the learning process for students with special needs

The following types of comprehension of the study information (including e-learning and distance learning) can be offered to students with disabilities (per their written request) in accordance with their individual psychophysical characteristics:

1. *for persons with vision disorders:* a printed text in a larger font; an electronic document; audios (conversion of the learning materials into audio); individual advisory work with the assistance of a sign language interpreter; individual assignments and advising.
2. *for persons with hearing disorders:* a printed text; an electronic document; video materials with subtitles; an individual advisory work with the assistance of a sign language interpreter; individual assignments and advisory work.
3. *for persons with muscle-skeleton disorders:* a printed text; an electronic document; audios; individual assignments and advisory work.

The following rules are absolutely obligatory for all the students to follow

1. Being late for lectures is strictly forbidden.
2. Being late for seminars is strictly forbidden.
3. Moving around the classroom, leaving the classroom, and (consequently) re-entering the classroom are strictly forbidden.
4. Using mobile phones, smartphones, tablets, smart watches, and similar devices during classes is strictly forbidden. All these devices must be put on silent mode prior to class.
5. Eating food and drinking beverages (with the exception of water) during classes are strictly forbidden.
6. Talking during classes is strictly forbidden, except when answering the teacher's questions or participating in a discussion initiated by the teacher.
7. The following rules must be followed during tests, exams, and similar procedures:
 - A) The students are informed of the seating arrangements approximately one hour prior to the procedure; the students may not change their designated places;
 - B) The students must leave their possessions, including black sheets of paper, on a designated desk or in the students' respective lockers, the only exceptions being a pen, a bottle of water, and a bar of chocolate;
 - C) If the use of a calculator is permitted during a procedure, the calculator must be non-programmable;
 - D) If the student is late for the procedure, he or she is not given additional time to do the tasks;
 - E) Each sheet of each work must bear the respective student's name; sheets not bearing the student's name receives the score of zero;
 - F) The students are not allowed to speak during procedures, to move around the classroom, or to leave it with the intention to return;
 - G) The students are not allowed to have or use any communication devices during procedures;
 - H) Cheating of any kind, including but not limited to referring to cheat sheets, copying information from cheat sheets, copying from the work of another student, looking up information on a digital or other device, and plagiarism, during procedures will prompt disciplinary action against the violator, which may lead to the student's being expelled;
 - I) Ten minutes before the end of the procedure, the students are no longer allowed to submit their work before the time allocated to the procedure runs out;
 - J) The students must put down their pens or pencils and put their works away when instructed to do so by the teacher;
 - K) If the procedure is conducted on a computer, the files created by the students must be named according to the format given before the procedure; if the files are named differently, they will not be checked;
 - L) The students are not allowed to take their respective works outside of the classroom;
8. The demonstration of the results and the appeal process
 - A) The demonstration of the results is not a procedure for disputing the results of the procedure;
 - B) Any disagreement with the received grades must be done in writing (in English), on a special form that the students will be provided if they ask for it; after each procedure, each student may submit no more than one such form; no second versions with incremental edits of any kind will be accepted;
 - C) Appeals are only accepted if the test, the exam, or a similar procedure was conducted improperly;
9. The final practical task has a blocking grade; this means that such a work absolutely must be done; the weight of the grade for this task will not be redistributed between the weights of other grades in any way;

10. A failing grade for the final practical task is considered as the failing of the entire course;
11. The attendance of the students is recorded by the means of the students' putting their signatures on the attendance sheet; this must be done at the beginning of the class;
12. Forging signatures is prohibited; doing so will prompt disciplinary action against the violator, which may lead to the student's being expelled;
13. The students must be civil and polite at all times; raising one's voice, using rude gestures, throwing things are prohibited;
14. Failure to observe any of the rules above will prompt disciplinary action against the violator, which may lead to the student's being expelled.