Course Description and instructions : Economic Statistics

Advanced level, 7.5 ECTS credits

Description of the course

The course consists of one moment Economic Statistics, 7.5 credits

The course discusses basic economic theory as a background for national accounts and index theory. The construction, interpretation and use of national accounts are discussed. Some basic index axioms and properties of the various indices are discussed. The measurement and the combination of the components included in national accounts and indexes, primarily price indices, are covered. Some key concepts such as enterprises and establishments are discussed, as well as standardization and harmonization incl. some different important standards e.g. trade and branch coding. Seasonal adjustment using some common software packages is mentioned. The course also covers time aspects of statistics e.g. the difference between flash estimates, preliminary statistics and definitive statistics. Data collection from businesses e.g. sampling, measurement, editing and frame maintenance is discussed

The course provides knowledge which is of great benefit not only in the production of economic statistics, but also for the interpretation of economic data, assessment of the economic situation and economic forecasting.

Expected learning outcomes:
After completing the course the student should be able to:
- Explain the fundamentals of the system of national accounts
- Describe different types of indices, both their contents and design, and also their pros and cons.
- Design a data collection intended to highlight the development of prices and/or volumes in an area
- Perform seasonal adjustment
- Link two series after a change in methodology
- Describe and use the most common standards in the sphere of economic statistics
- Develop a simple statistical system with statistical reports at different time points

Examination:
The examination is made partly through assignments, partly through a written examination at the end of the course. The assignments will be graded by pass or not pass.
The dates and location of the final exam can be found at the home page.
The written exam is in English. Answers may be given in either Swedish or English. The test will consist of 5 questions (One or two questions from each of the three parts). Each question gives at 20 credits if correctly answerd. Hence a maximum of 100 credits is possible.
Examination time is 5 hours.

Notification for the exam is compulsory

The written exam will be assigned grades according to the following scale

A	Excellent 90 – 100
B	Very good 80 – 89
C	Good 70 – 79
D	Satisfactory 60 – 69
E	Adequate 50 – 59
Fx	Insufficient 30 – 49
F	Fail – 29

The grades on the course are also given on a seven-referenced scale:

A = Excellent
B = Very good
C = Good
D = Satisfactory
E = Adequate
Fx = Insufficient
F = Fail

To pass the course at least grade E on the exam is required and pass on all assignments. Students who receive the grades Fx or F on a test have a right to take at least three retests to achieve a minimum grade of E. Students who receive a grade of E may not retake the examination for a higher grade. Students who receive an F or Fx on two occasions by one examiner have the right to request that another examiner is appointed to grade their exam. Such requests must be made in writing to the head of the department ("prefekten"). What is said here about exam holds also for other mandatory elements. Assignments having got a pass are valid until the next time the course is given.

Teaching:
The course consists of 16 lectures, each two hours. The schedule can be found at the department website.

To get good results on the course it is important to attend all teaching moments.
The course is equivalent to 7.5 credits, which in turn corresponds to 10 half weeks or 200 hours. A normal workload could be distributed as follows: 32 hours of lectures, 24 hours of work with assignments, 5 hours writing, 40 hours independenty trying to solve exercises (for hand or on a computer) and 99 hours careful study of the literature.

Required Reading:
Francois Lequiller and Derek Blades. Understanding National Accounts. OECD. Latest edition (It is available at http://www.oecd.org/) Chapters 1-5, 10-11
Consumer Price Index Manual - Theory and Practice. ILO (selection). Latest edition (see course description). (It is available on http://www.ilo.org/)
All lecture notes – will appear at the web page after the lecture and handed out during the lectures
Material handed out during the lectures.

Supplementary reading – Reference material:
Francois Lequiller and Derek Blades. Understanding National Accounts. OECD. Latest edition (It is available at http://www.oecd.org/) Remaining chapters
Consumer Price Index Manual: Theory and Practices

Background Facts on Economic Statistics – SAMU - The system for co-ordination of frame populations and samples, SCB 2003:3
Esbjöm Ohlsson, (1992), The System for Co-ordination of Samples from the Business Register at Statistics Sweden, SCB 1992:18

Teachers:
Martin Ribe, , Birgitta Magnusson, Anders Jäder, Daniel Thorburn et al
Coordinator and examiner: Daniel Thorburn, 08 - 16 29 56, daniel,thorburn @ stat.su.se

Preliminary contents (Changes may be made):
1. Price indices: Economic theory (indifference curves, index axiom, supply and demand, price and volume indices, productivity, ...)
Various index formulas (Laspeyre, Paasche, Jevons, Fisher, Törnquist, Malmquist, ideal, superlative, hedonic etc.) Chain indices.
Different indices (CPI, the net price index, producer price index, export price index, house price indices, ... PPP, Cost of Living Index ...)
Data collection, measurement theory: (Crossclassified sampling, HBS, basket changes etc)...)
Data collection, special problems: (Kvalitetskorrektioner, sales, special offer, accommodation component, new products, subsidized goods such as health care...)
2. National Accounts:
Economic theory: (GDP, NDP, GNP, ... Investment and Consumption, Foreign Trade, Supply and balance of payments, producer or consumer side, Input-Output Tables, flow ...)
Structure of GDP, Satellite Accounts (Regional accounts, environmental accounts, health ...)
Standardization: (SNI, SPIN, SITC, SSYK, tariff nomenclature, EAN, ...)
Data collection, data sources, Forecasts, preliminary statistics, final statistics, revisions, Quality Indicators
3. Other:
Bueiness registers: Update, new establishments, industry changes, mergers and spin-offs. Enterprises, establishments, Selection Methods, Coordination, Consistency, JALES/SAMU)
Data Sources: Records and sample surveys, tax returns, financial statements, tax records, payroll tax / withholding tax Survey Methodology: Fixed contacts, Electronic Data Retrieval, Form Construction, Coupling to Accounting Software
Technical problems: Editing and Imputation, Micro and macro examination, Crooked populations, outliers, Time Series Problem: Linking, seasonal adjustment
Reporting issues, quality