Organisation

- Office hours: thursday 5pm-6.30pm room 302.
- Web page with materials related to the lecture:
  
  http:\www.ekonometria.wne.uw.edu.pl

- Problems (polish versions): Mr Krzysztofik room at the department

- Exam - written
– mid term (in February) - 1st semester (not obligatory)
– final (in June) - 1 i 2 semester.

• Exam form:
  – only students who attended the problem sessions will be admitted to the exam
  – exam has two parts, each related to one semester, to pass the exam it is necessary to pass both parts
  – each parts take 90 min and consist of
    * 4 theoretical questions from list of exam questions (can be modified)
    * 2 problems from problem set (numbers can be modified)
    * 1 problem out of the problem set
- necessary conditions for passing is
  * solve one problem for each semester
  * correct answer on two questions for each semester

- Criteria for final grade (one for two semesters):
  - it is calculated as a mean of 1st semester, 2nd semester grade and mean of grades from problem sessions
  - in case of failing one of the semester in June, students have a second chance to pass it in September
  - in case of failing in September both semester have to be repeated

- Problem sessions
– same program in all the groups apart from specialization Computer Science and Econometrics
– changing groups for problem sessions only possible with permission of the Dean Office
– presence at problem sessions is obligatory, and is verified on the basis of short quizzes at the beginning
– quizzes consist of questions given at the end of lecture
– at the end of each semester there will be a test with problems from the problem set
– final grade from problem sessions consists of 40% final test grade, 20% quizzes, 40% empirical paper
– the most important aim of the problem sessions is to teach how to use in practice the econometric tools
– all students have to submit one empirical paper in each semester
– empirical papers can be written in groups consisting of at most 2 persons
– authors of 7 best empirical papers in semesters will be exempted from the exam in this semester given they get at least 4 from the final test at problem sessions

• Software: only empirical papers done with STATa will be accepted
Books

- In Polish
  - Skrypt do wykładu
  - Zadania do wykładu
  - Slajdy do wykładu
  - Goldberger (1972)
  - Theil (1979)
  - Welfe (1995)
  - Chow (1995)

- In English
– Slides to the lecture
– Problem Set
– Gujarati (1988)
– Steward (1991)
– Davidson (1993) (advanced)
Subject of econometrics

- Econometrics covers
  - estimation of quantitative relationships between economic variables
  - empirical testing of economic theories
- Theoretical econometrics: developing estimation methods
- Applied econometrics: estimation of economic relationships with econometric tools
What is the model?

- Construction and estimation of the models make possible to discover important features of economic reality
Example (Data Polish Statistical Office - December 2002)

<table>
<thead>
<tr>
<th>category</th>
<th>mean wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>men</td>
<td>2515 zł</td>
</tr>
<tr>
<td>women</td>
<td>2022 zł</td>
</tr>
</tbody>
</table>

Number of observations: 6717

<table>
<thead>
<tr>
<th>category</th>
<th>mean wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>men</td>
<td>18.79 lat</td>
</tr>
<tr>
<td>women</td>
<td>18.35 lat</td>
</tr>
</tbody>
</table>
– Influence of the work experience and sex:

<table>
<thead>
<tr>
<th>Influence</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>additional year of experiance</td>
<td>21.6</td>
</tr>
<tr>
<td>being woman</td>
<td>-435.4</td>
</tr>
</tbody>
</table>

– Influence of the work experience, sex and education

<table>
<thead>
<tr>
<th>Influence</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>additional year of experiance</td>
<td>32.1</td>
</tr>
<tr>
<td>being woman</td>
<td>-746.0</td>
</tr>
<tr>
<td>education</td>
<td>(we omit these coefficients)</td>
</tr>
</tbody>
</table>
Econometric model (role of theory)

- Linear form of the model

\[ C = \beta_0 + \beta_1 Y \]

- \( 0 < MPC < 1 \implies 0 < \beta_1 < 1 \)

- \( APC \downarrow \implies \beta_0 > 0 \)

- Interpretation of \( \beta_1 \) - MPC
- Polish data years 1995 – 2004, CPI deflator
\[ C = \beta_0 + \beta_1 Y + u \]

- Estimates (for GDP in mln zł from year 1995):

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>( b_0 ) (constant)</td>
<td>29967.15</td>
</tr>
<tr>
<td>( b_1 ) (MPC)</td>
<td>.51</td>
</tr>
</tbody>
</table>