Tourism Macroeconomics
Part I – Tourism in the Macroeconomy
Week 01 - Introduction

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Aim of the Course

Everything you wanted to know about this course unit (but were afraid to ask) ... is here
A few tips on the course

The book
Guido Candela & Paolo Figini, *The Economics of Tourism Destinations*, Heidelberg: Springer, 2012 (chps 2, 3, 4, 13, 14)
It will also be used in Tourism Microeconomics (2nd semester) and in Economics of Tourism Destinations (3rd semester)

Hardcopy – Library, e-commerce sites
Softcopy – Springer website and other e-commerce sites

The exam:
Two written tests (November and January), each counting 40% of the final mark (for the two parts)
On going assessment and final report & presentation, counting for 20% (for the lab part).

Lectures + Labs: check the schedule on the website.
A few tips on the course (2)

The programme
PART I
1. Introduction to the concepts of market, growth and development;
2. Tourism: concepts, definitions, measures
3. Tourism in the national accounting
4. Tourism in the macroeconomy (Prof. Saayman)
5. The international flow of tourists (Prof. Saayman)

PART II
6. Tourism and growth
7. Tourism and sustainability (Prof. Sahli)
8. Globalisation and tourism (Prof. Sahli)
9. Market failures in tourism
10. Conclusions

LAB
A. Finding, collecting and cleaning economic data
B. Statistical analysis of economic data
A step backward: economics & the market

The theoretical framework

**Economics** – the study of individual (micro) and collective (macro) choices undertaken when there is *scarcity of resources*.

- Then, the solution to the economic problem has to be the **search for efficiency**.

The market is an decentralized institution where demand and supply meet through the information provided by the **price**.

- The economic thought has been developing a fascinating theoretical framework: the **model of perfect competition**.
- Underlying assumptions: the economic agents are atomistic, antisocial, rational maximisers, selfish and perfectly informed agents.
- Positive relevance of the model: more or less, we all and always behave like this...
- If not, special cases of bounded rationality, imperfect information, asymmetries, etc...
A step backward: economics & the market (2)

The main result of the model is the Arrow-Debreu efficiency condition (First Theorem of Welfare Economics):

**The competitive market is efficient and overall welfare is maximised**

In perfect competition, consumers maximise their utility, while profits are nil.

**Dynamically**, efficiency is the search for maximum growth.
- Firms act to reduce production costs and to take advantage of economies of scale
- Merger & acquisition processes bring concentration of market power in the hands of a few firms.

This is the main “contradiction” of capitalism:
- The search for efficiency produces monopolies...
- … but monopolies are inefficient, being a source of power and redistributing welfare from consumers to producers.
A step backward: economics & the market (3)

To sum up:

Analysis of market relationships
Everything (goals and values) is expressed in market values

The main economic goal is to maximize income (the measure of value added production) and growth (its increase over time)

Market failures and limited rationality call for the intervention of the public sector in the economy:
- to help the market work more efficiently;
- to correct macroeconomic imbalances;
- to redistribute incomes and to alleviate poverty.
The real world at a glance
The Peters Projection of the World Map – Keeping the proportions of the land area
The World Map according to annual income (2015, PPP USD)
The World Map according to absolute poverty (people living below 2 USD a day)

(Courtesy of worldmapper.org)
World GDP/capita 1-2003 A.D.
Some facts, some questions

Fact 1. There are strong inequalities all over the world, in terms of incomes and poverty rates

Fact 2. Growth and development are recent trends in human history

Fact 3. Countries get richer, countries get poorer, inequality widens, inequality shrinks

Question 1. How do we define and measure concepts such as income, poverty, development, inequality?

Question 2. Are growth and development synonymous?

Question 3. What are the factors enhancing growth and development?

Question 4. Is there a role to play for tourism in the development of nations?
Income and Growth – Concepts and Definitions

A. Gross Domestic Product

Overall market value of final goods and services produced within a country in a given period of time (usually one year)

GDP is the most important measure of aggregate income

GDP = Consumption + Investment + Exports

The GDP of selected countries is in the attached file

Clear problem: the ranking is biased by the size of the country (the population
Income and Growth – Concepts and Definitions

B. Per capita income

GDP per capita = GDP / Population

The GDP per capita of selected countries is in the attached file:

Another problem: the ranking is biased by the different cost of living in the different countries

C. Per capita income adjusted in terms of purchasing power parity (PPP)

Usually, poor countries enjoy lower prices (lower cost of living)

Adjust incomes in order to measure how many representative bundles of goods can be purchased with the average income
Income and Growth – Concepts and Definitions

Example: two countries (Mexico and US) and two currencies (peso and dollar)

\[ \text{GDP}_{\text{PCUS}} = 1000 \text{ USD} \]
\[ \text{GDP}_{\text{PCMEX}} = 1000 \text{ P} \]

If the exchange rate is 1 USD = 2 pesos, \( \text{GDP}_{\text{PCMEX}} = 500 \text{ USD} \).

Then, \( \text{GDP}_{\text{PCUS}} = 2 \times \text{GDP}_{\text{PCMEX}} \)

But, what if the representative good costs 20 USD in the US and 25 pesos in Mexico (which is equivalent to 12.5 dollars?)

\[ \text{GDP}_{\text{PCUS(PPP)}} = \frac{1000}{20} = 50 \]
\[ \text{GDP}_{\text{PCMEX(PPP)}} = \frac{1000}{25} = 40. \]

Hence, \( \text{GDP}_{\text{PCUS(PPP)}} \) is only 25\% more of \( \text{GDP}_{\text{PCMEX(PPP)}} \)
Income and Growth – Concepts and Definitions

Problems

There is no such thing as a representative bundle of goods
  – Rule of thumb methods: the Big Mac Index

In international measurement, one considers that 1 USD = 1 USD PPP
(the local cost of living is considered in relations to the cost of living in
the US)

The GDP per capita PPP of selected countries is in the attached file

D. Economic Growth rate

Percentage change of an economic variable in a period

\[
\frac{Y_1 - Y_0}{Y_0}
\]
Income and Growth – Concepts and Definitions

Problems

Growth is important, and small variations in the growth rate can have breakthrough effects

Consider two countries (A and B) with the same level of income ($Y = 100$) and see what happens 50 years later if A annually grows at 2% and B at 3%:

\[
Y(A) = 100 (1 + 0.02)^{50} = 269.16
\]

\[
Y(B) = 100 (1 + 0.03)^{50} = 438.39
\]

B's income is 63% higher than A's!

In the attached file, you can find the ranking of selected countries as regards percapita income growth.

Usually, for intertemporal comparisons real data are considered, in order to avoid biases due to inflation. Series are *deflated*
Growth and Development

The concept of growth refers to the increase of a certain relevant variable (usually income) over time

- **Income** is a flow variable, **wealth** is a stock variable

“Economic development must also deal with economic, social, political and institutional mechanisms necessary to bring about rapid and large-scale improvements in levels of living of the peoples... Development must therefore be conceived of as a multidimensional process involving major changes in social structures, popular attitudes and national institutions, as well as the acceleration of economic growth, the reduction of inequality and the eradication of poverty” (M. Todaro).

Development = growth + structural break
The limits of income and growth

The economic approach to well-being:

At the individual level, utility is a function of income: $U = U(Y)$

At the aggregate level, well-being is a function of aggregate income (GDP)

Hence, the intertemporal goal has to be to maximize income growth

But income has some, well-known, limits.

“What happens to national income if a man marries his maid?” (J.M. Keynes)

National income goes down!
The limits of income and growth

Four main limitations of income as a measure of well-being:

1. It only accounts for what goes through the market (it is an *imprecise* measure of well-being)

2. It does not take into account the quality of the goods and services (it is a *biased* measure of well-being)

3. It does not take into account individual freedom of choice and non monotonicity of the relationship (it is *too a simple* measure of well-being)

4. It does not take into account inequality and social comparisons (it is a *flat* measure of well-being).
The limits of income and growth

Robert Kennedy:

“The gross national product includes air pollution and advertising for cigarettes and ambulances to clear our highways of carnage. It counts special locks for our doors and jails for the people who break them. GNP includes the destruction of the redwoods and the death of Lake Superior. It grows with the production of napalm, and missiles and nuclear warheads... it does not allow for the health of our families, the quality of their education, or the joy of their play. It is indifferent to the decency of our factories and the safety of our streets alike. It does not include the beauty of our poetry or the strength of our marriages, or the intelligence of our public debate or the integrity of our public officials. It measures everything, in short, except that which makes life worthwhile”.
The limits of income and growth

How to solve the “income paradox”? 

a) Provide an economic value to non-market or semi-market goods
b) Build composite indices of welfare or human development
c) Study the relationship between income and well-being

With respect to point (b), the UNDP introduced the concept of Human Development, based on Sen's approach of capabilities, in which freedom to choose is the key concept.

Have a break:

Prepare a list of ten essential choices, which you feel are necessary for well-being (5 minutes for this task). Form buzz-groups in clusters of five and consolidate your lists into a single list of 10 points (10 minutes). Share the lists in the plenary and discuss points of convergence and divergence.
“Development can be seen... as a process of expanding the real freedoms that people enjoy”. (A. Sen)

Development is a matter of ends rather than means: it consists in more people having **better chances to lead a better life**.

Sen has elaborated the idea in terms of **functionings** and **capabilities**.

A human life may be seen as a set of interrelated "functionings" (a set of beings and doings contributing to her/his personal welfare)

Capabilities are the various combinations of functionings a person can achieve, in exercising his or her freedom to select a life style.

According to this concept, development must be more than just the expansion of income and wealth. Its focus must be **people**.

**DEVELOPMENT IS FREEDOM**
Human Development

Key concepts of human development:

- To produce more, particularly in terms of basic services
- Improve the living standards and self-esteem
- To expand the freedom of choice

“It is more than just the rise or fall of national incomes. Development is thus about expanding the choices people have, to lead lives that they value and improving the human condition so that people will get the chance to lead full lives. And it is thus about much more than economic growth, which is only a means, if a very important one, of enlarging people’s choices”. (A. Sen)

On a practical basis, the measurement of human development pivots around three dimensions:

INCOME, EDUCATION, HEALTH
The Human Development Index

The index is a weighted sum of three components: health, education, income.

Each component measures the relative deprivation (in terms of what is attainable worldwide). New computation since 2011.

**Health**: measured as life expectancy

Life Expectancy Index of country i:

\[
\text{LEI}(i) = \frac{(\text{LE}(i) - 20)}{(85 - 20)}
\]

**Education**: measured through the Mean Years of Schooling Index: \(\text{MYSI}(i) = \frac{\text{MYS}(i)}{15}\) and the Expected Years of Schooling Index: \(\text{EYSI}(i) = \frac{\text{EYS}(i)}{18}\)

Education index(i):

\[
\text{EI}(i) = \frac{1}{2} \text{MYSI}(i) + \frac{1}{2} \text{EYSI}(i)
\]
The Human Development Index

**Income**: measured through the PPP per-capita income Y, adjusted for the non linearity (in logs)

GDP index(i):

\[
\text{GDPI}(i) = \frac{(\ln Y(i) - \ln 100)}{(\ln 75000 - \ln 100)}
\]

Human Development Index

It is computed as the geometric mean of the three components

\[
\text{HDI}(i) = (\text{LEI}(i) \text{ EI}(i) \text{ GDPI}(i))^{1/3}
\]

The HDIs of selected countries are in the attached file
An example

Compute the HDI for TEaMland, a country in which there are the following indicators:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Teamland</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth</td>
<td>75</td>
<td>85</td>
<td>20</td>
</tr>
<tr>
<td>Mean Years of Schooling Index</td>
<td>12</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Expected Years of Schooling Index</td>
<td>90</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Income Index (PC, PPP)</td>
<td>12000</td>
<td>75,000</td>
<td>100</td>
</tr>
</tbody>
</table>

The HDI for Teamland is....

What does it mean?
fig. 1.1. Più pro capite in parità di poteri d’acquisto (PPP) e indice di sviluppo umano in 174 paesi del mondo, 1993-2000 (valori ed interpolanti logaritmiche (Log), paesi con meno e più di due milioni di abitanti).

Poverty and Inequality

A. The concepts

**Inequality** – the degree of dispersion of income (any variable) among a population
- **Functional distribution** – how income is distributed between factors of production → the classical debate in economics pivots around the distribution between capital and labour (profits and wages)
- **Personal distribution** – how income is distributed among a population sorted by increasing income

**Poverty** – it is pronounced deprivation of well-being. According to the meaning of “pronounced” we can define:
- **Absolute poverty**: An individual is in absolute poverty if s/he does not have adequate means of subsistence (can not afford basic food and non-food items).
- **Relative poverty**: An individual is in relative poverty if her/his income is below a certain threshold, relative to the population s/he belongs to.
Poverty and Inequality

B. The measurement

**Poverty** – set up the threshold, count the number of people below the threshold, and measure their share: **Headcount Poverty Ratio**

\[
\text{HPI} = \frac{P}{N}
\]

where \( P \) is the number of poor and \( N \) total population.

Other more sophisticated indices, which satisfy theoretical axioms, have been introduced, but seldom used (Foster, Greer & Thorbecke).

**Inequality** – The Lorenz curve and any index which is consistent with the Criterion of Lorenz dominance

**Gini** is the most commonly used, but others can be used (Atkinson, Theil, Kakwani...)

Some inconsistent measures are sometimes used (ratio between income to top 10% and to bottom 10%...)

Inequality is such a blurred concept...
Poverty and Inequality

C. Discussion

Consider the following income distributions of countries \( A \) and \( B \):

\[
A = [2, 4, 6, 8, 10] \quad B = [4, 8, 12, 16, 20]
\]

i) Where is higher inequality, in \( A \) or in \( B \)?

ii) Where is higher about absolute poverty (if the poverty line is 5)?

iii) Where is higher relative poverty (if the poverty line is 50% of average income)?

iv) Consider a transfer of one unit of income from the 2nd to the 1st person in \( A \), so that the distribution becomes \( A' = [3, 3, 6, 8, 10] \). What happens to inequality and poverty?

v) Consider a bigger country \( C \) which distribution is \( C = [4, 4, 8, 8, 12, 12, 16, 16, 20, 20] \). How do you compare it w.r.t. \( A \) and \( B \)?

vi) Where is higher inequality: in \( A \) or in \( D = [3, 3, 3, 3, 18] \)?
<table>
<thead>
<tr>
<th>Country</th>
<th>Gini ('80)</th>
<th>Gini ('90)</th>
<th>Gini ('00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>0.292</td>
<td>0.308</td>
<td>0.305</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.227</td>
<td>0.266</td>
<td>0.280</td>
</tr>
<tr>
<td>Canada</td>
<td>0.283</td>
<td>0.284</td>
<td>0.321</td>
</tr>
<tr>
<td>Finland</td>
<td>0.209</td>
<td>0.217</td>
<td>0.268</td>
</tr>
<tr>
<td>France</td>
<td>0.288</td>
<td>0.288</td>
<td>0.327</td>
</tr>
<tr>
<td>Germany</td>
<td>0.260</td>
<td>0.273</td>
<td>0.270</td>
</tr>
<tr>
<td>Italy</td>
<td>0.306</td>
<td>0.338</td>
<td>0.320</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.260</td>
<td>0.257</td>
<td>0.309</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.197</td>
<td>0.221</td>
<td>0.230</td>
</tr>
<tr>
<td>UK</td>
<td>0.303</td>
<td>0.344</td>
<td>0.340</td>
</tr>
<tr>
<td>US</td>
<td>0.335</td>
<td>0.355</td>
<td>0.450</td>
</tr>
<tr>
<td>Country</td>
<td>Gini ('70)</td>
<td>Gini ('80)</td>
<td>Gini ('90)</td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Argentina</td>
<td>0.44</td>
<td>0.42</td>
<td>0.48</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.58</td>
<td>0.58</td>
<td>0.6</td>
</tr>
<tr>
<td>Chile</td>
<td>0.46</td>
<td>0.53</td>
<td>0.58</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.58</td>
<td>0.5</td>
<td>0.55</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.37</td>
<td>0.41</td>
<td>0.43</td>
</tr>
<tr>
<td>Tanzania</td>
<td>0.39</td>
<td>0.44</td>
<td>0.38</td>
</tr>
<tr>
<td>Tunisia</td>
<td>0.42</td>
<td>0.43</td>
<td>0.4</td>
</tr>
</tbody>
</table>
### TABLE 2
**Between-Group Changes in Wages in the UK and the US**

<table>
<thead>
<tr>
<th>Differential</th>
<th>Late 1960s–Early 1970s</th>
<th>Late 1970s–Early 1980s</th>
<th>Late 1980s–Early 1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year</td>
<td>Ratio</td>
<td>Year</td>
</tr>
<tr>
<td><strong>Educational Differentials (males)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK University/no-qualification</td>
<td>1974</td>
<td>1.64</td>
<td>1980</td>
</tr>
<tr>
<td>US College/High school</td>
<td>1969</td>
<td>1.49</td>
<td>1979</td>
</tr>
<tr>
<td><strong>Occupational Differentials (manufact.)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Non-production/production</td>
<td>1970</td>
<td>1.56</td>
<td>1980</td>
</tr>
<tr>
<td><strong>Age Differentials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK 40–49/21–24</td>
<td>1974</td>
<td>1.27</td>
<td>1980</td>
</tr>
</tbody>
</table>

*Source: Machin (1996a), Table 4, p. 52.*

Poverty data: see the attached document
A glance at the theory of growth and development

What is the main engine of growth?

Technological progress

Okay, so what are the determinants of technological progress?
Two strands of literature (endogenous growth theory):

human capital and R&D

In both cases, it is INVESTMENT IN KNOWLEDGE

Role for both private and public sector

Other important variables: Provision of public goods, quality of institutions (democratic capital, corruption, market regulations), openness to international markets, inequality, social capital...

In terms of economic development, two main theories are debated:

Export-Led Strategy vs. Import Substitution Industrialization

Key role played by State intervention and External Debt.
References

The main references for Week 1 Lectures are: