Macroeconomics I Labs

Dr Łukasz Matuszczak

Macroeconomics I

Presentation plan:

- Grading criteria

- Course Schedule

- What macroeconomics deals with

- National accounts (in accordance with NSA and ESA) - circular flow model

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A few words about yourself

- Obtained a master's degree in 2011 in the field of Computer Science and Econometrics at WNE UW.

- Started working at the Department of Statistics at NBP.

- 2019 - defended doctoral dissertation in the field of foreign trade.

- Interests

- Contact options: Email: lmatuszczak@wne.uw.edu.pl Office hours: date and place to be determined - after prior notification by email.

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Passing rules

- Completion of exercises is a necessary condition to take the exam.
- The weight of exercises in the overall subject assessment is 30%.
- There are 100 points available for exercises:
  - 10 points for Activity 60 points for the final Labs Exam (must be "halved")
  - 20 points for completion project
  - 10 points for Project Presentation

Passing requires a minimum of 50 points.

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Passing rules

- The final Labs Exam:
  - The exam covers topics from the entire lab's program.
  - Mainly tasks.
  - Problematic questions may arise (similar to those on the exam).

To pass the exercises, you must achieve at least 50%.

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Passing rules

The Project:

- The first good news: the possibility of writing in groups (preferably groups of 3 people)

- Many topics to choose from Topics will be assigned by drawing after forming the group and reporting it

- Presentation and joint discussion during exercises (10th and 11th) - negotiations possible (e.g., in the middle of the semester)

- Deadline for submission - around the end of May

- Penalty for lateness - 10% of initial points for each day of delay

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The Project:

- Formal issues:

- The thesis should be prepared according to the criteria for preparing diploma theses (thesis writing rules tab)

- Data presentation – charts and tables (we do not describe the data, only conclusions and summaries)

- We provide data sources,

- We try to relate the data to the situation of other important countries and organizations - we do not live in isolation.

Data sources

Polish:

- http://www.stat.gov.pl/gus
- http://www.nbp.pl/
- http://www.stooq.pl/

International:

- http://data.worldbank.org/
- http://www.oecd-ilibrary.org/content/statistics
- http://stats.oecd.org/
- http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
- http://www.nber.org/data/
- http://www.bls.gov/data/
- http://www.google.com/publicdata/directory

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Passing Rules

0 – 59 pkt.	**Insufficient**
60 – 70 pkt.	**Sufficient (3 - C)**
71 – 80 pkt.	**Sufficient plus (3,5 - C+)**
81 – 85 pkt.	**Good (4 - B)**
86 – 90 pkt.	**Good plus (4,5 - B+)**
91 – 100 pkt.	**Very good (5 - A)**

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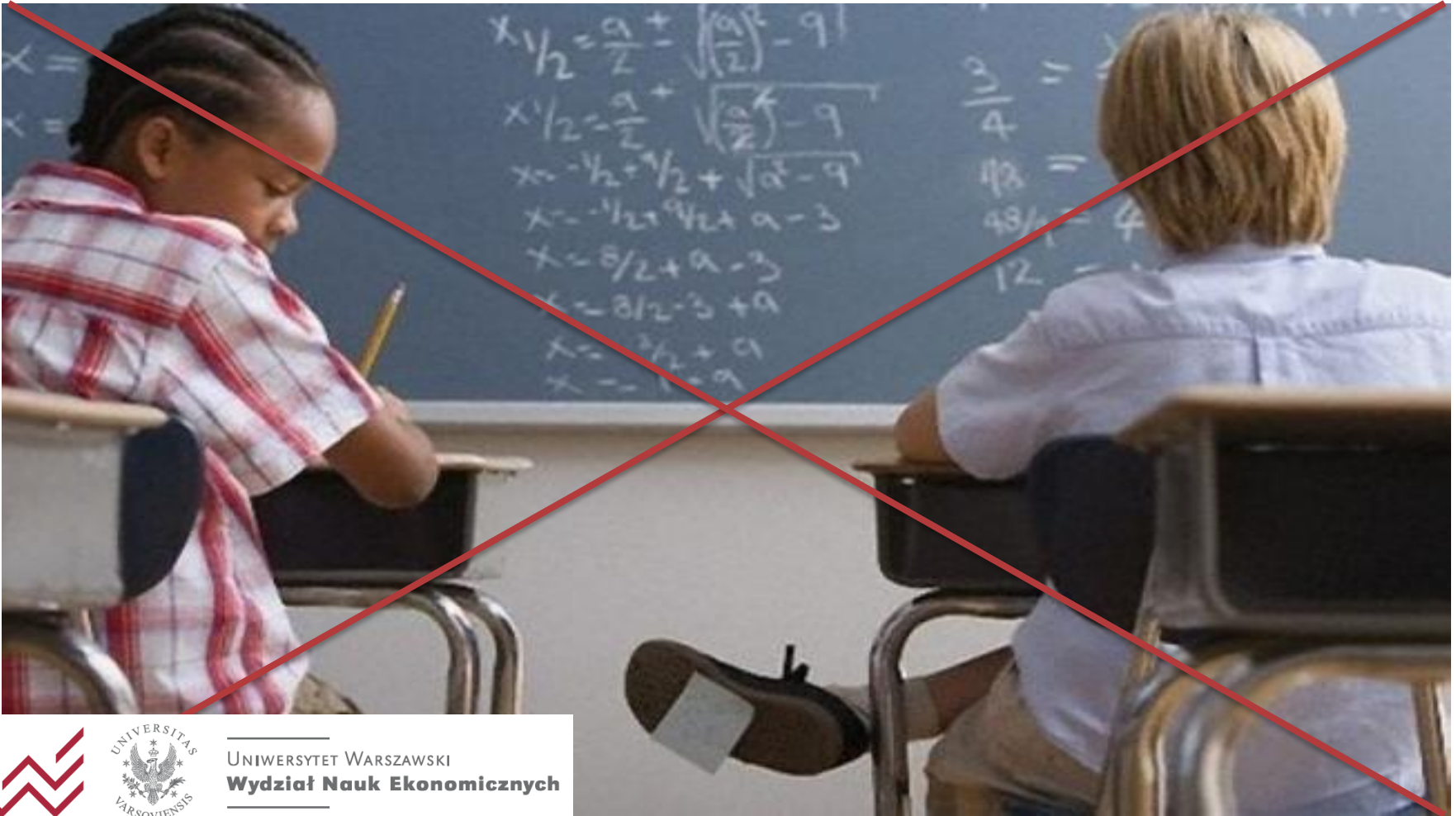
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Passing Rules

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Any questions regarding the rules of passing the exam?

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Obligatory literature

- Blanchard O., Makroekonomia, Oficyna Wolters Kluwer Busieness, Warszawa 2016.
- Begg D., VernascaG., Fischer S., Dornbusch R., Makroekonomia, PWE, Warszawa 2014.
- Mankiw G., Macroeconomics, Worth Publishers, 2016.
- Burda M., Wyplosz Ch., Makroekonomia. Podręcznik europejski, PWE, Warszawa 2007.
- Brzozowski M., Cieślik A., Przewodnik po zadaniach z makroekonomii, WSiP, Warszawa 2004.

Additional literature:

- Begg D., P. Smith, Ekonomia. Zbiór zadań, PWE, Warszawa 2001.
- Dornbusch R., S. Fisher, Macroeconomics, ed.8, New York 2000, McGraw-Hill, część.
- Hall R., J. B. Taylor , Makroekonomia, PWN, Warszawa 2000, rozdz. 1-3.
- Keynes J.M., Ogólna teoria zatrudnienia, procentu i pieniądza, PWN, Warszawa 1985, rozdz. 6, 18.

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Brief presentation of the action plan
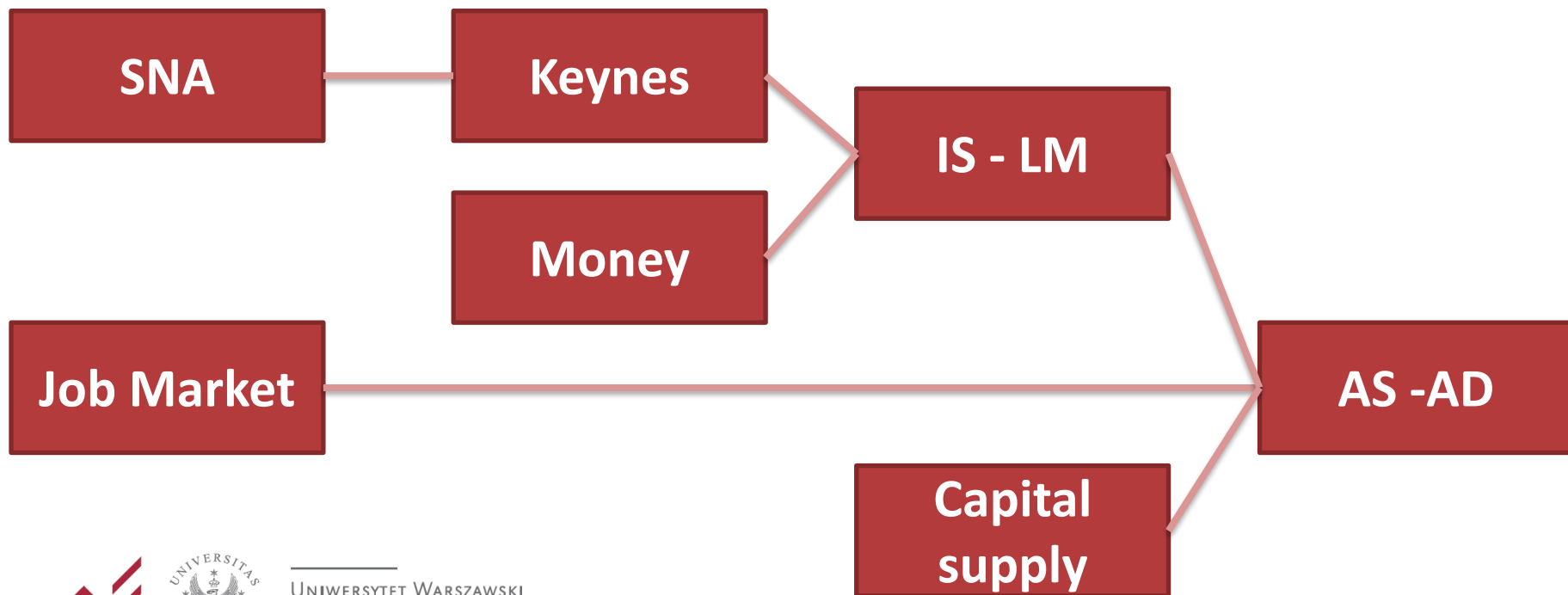
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Some of the basic measures

- GDP/GNP

- GDP per capita

- Unemployment (economically active, etc.)

- Growth dynamics
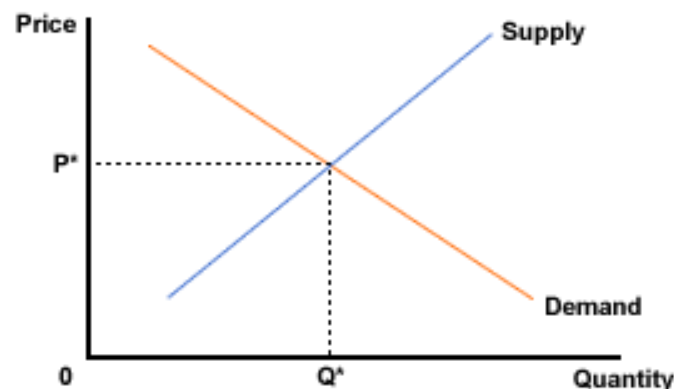
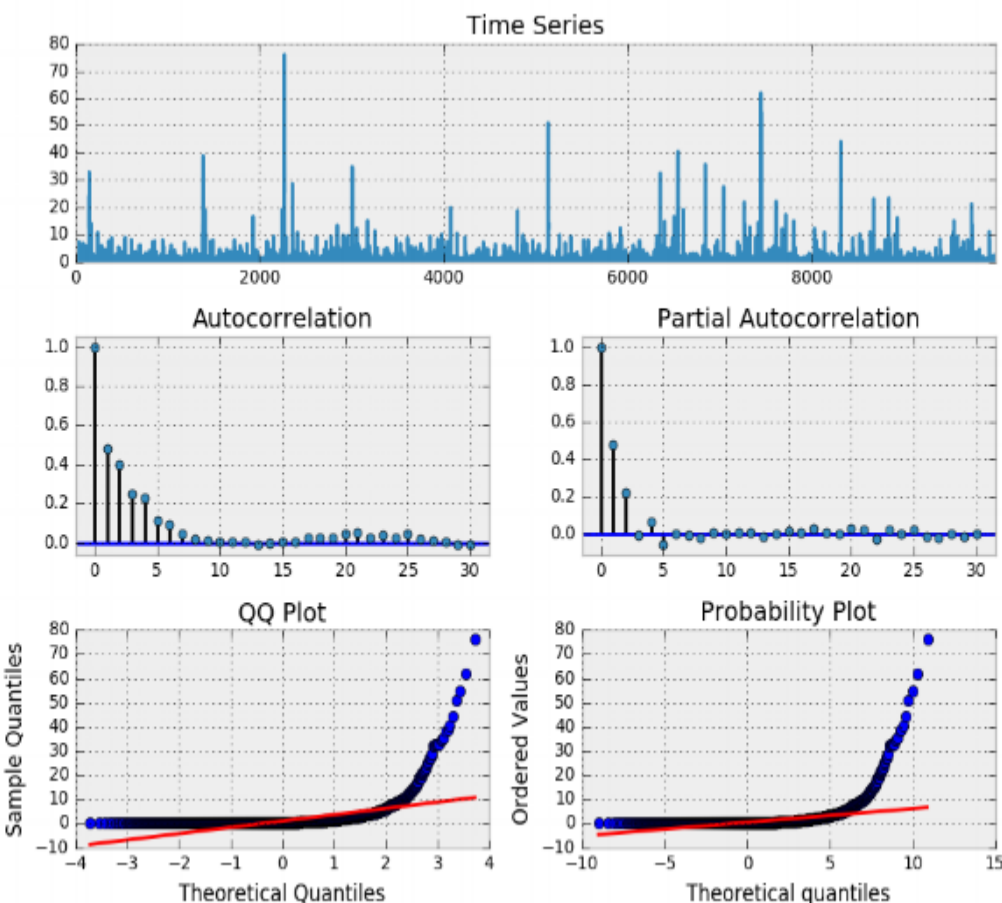- Human Development Index (HDI)

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- What methods are used to study economic relationships?

Modeling:

- What does it mean (complicated reality)

- Dependency research

- Forecasting

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Parameter	Coeff	Parameter	Coeff	parameter	Coeff
α_{01}	0.000325 (0.98)	α_{02}	0.000829 (0.79)	α_{03}	0.000415 (0.78)
α_{11}	-0.0462^{**} (-2.55)	α_{12}	0.3022^{**} (7.51)	α_{013}	0.3333^{**} (10.99)
α_{21}		α_{22}	0.2016^{**} (5.89)	α_{23}	0.1569^{**} (4.69)
α_{31}		α_{32}	0.1737^{**} (6.15)	α_{33}	0.0923^{**} (3.43)
β_{11}	-0.3244^{**} (-23.58)	β_{12}	-0.1929^{**} (-5.45)	β_{13}	-0.0338 (-1.15)
β_{21}	-0.0718^{**} (-7.33)	β_{22}	0.000375 (0.01)	β_{23}	-0.002107 (-0.05)
ω_1	0.000137^{**} (28.93)	ω_2	0.001685^{**} (4.71)	ω_3	0.0000714^{**} (5.66)
γ_{11}	0.5140^{**} (13.97)	γ_{12}	0.1436^{**} (3.57)	γ_{13}	0.1658^{**} (10.13)
γ_{21}		γ_{22}		γ_{23}	
δ_{11}		δ_{12}	0.2746^{*} (1.86)	δ_{13}	0.8029^{**} (47.12)

( ):t-value, * : 10% significance level ** : 5% significance level

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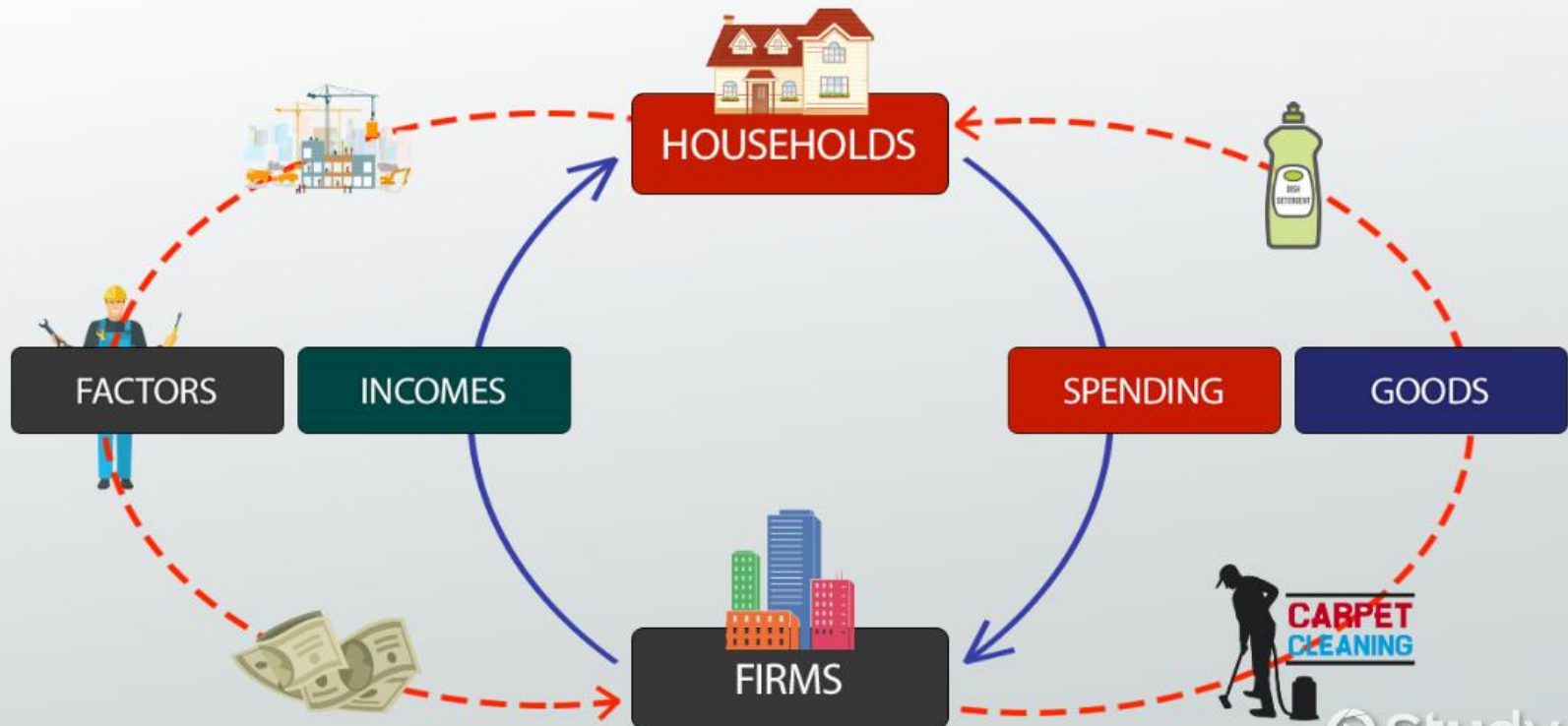## Simple Circular Flow model – (CF)

Initial assumptions for the model:

- lack of state (government) and abroad,

- households have production factors (including labor inputs) and supply them to enterprises,

- households are the sole owners of enterprises,

- companies provide goods and services,

- all household income is spent on goods and services,

- total revenue from the sale of goods and services is spent on factors of production.
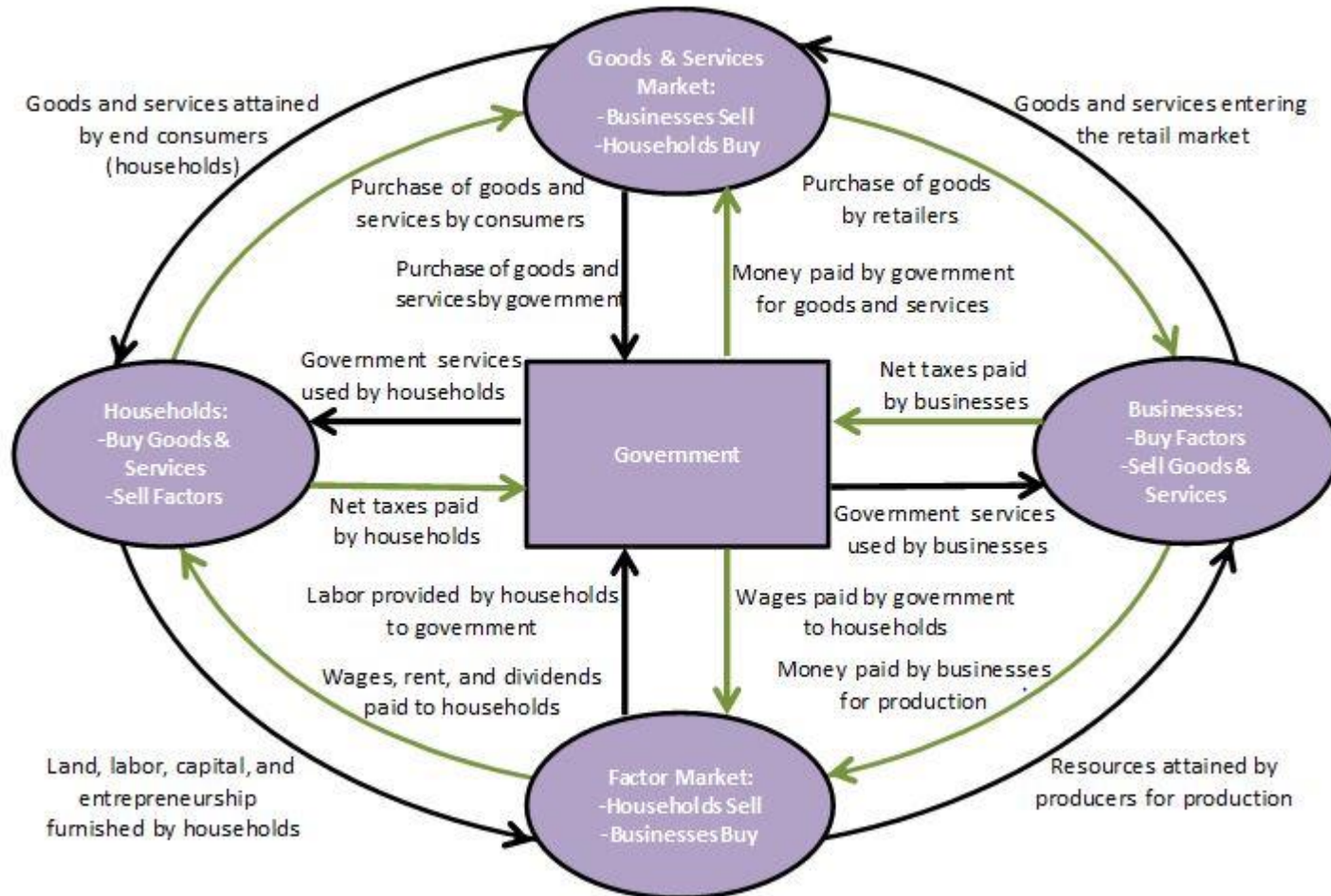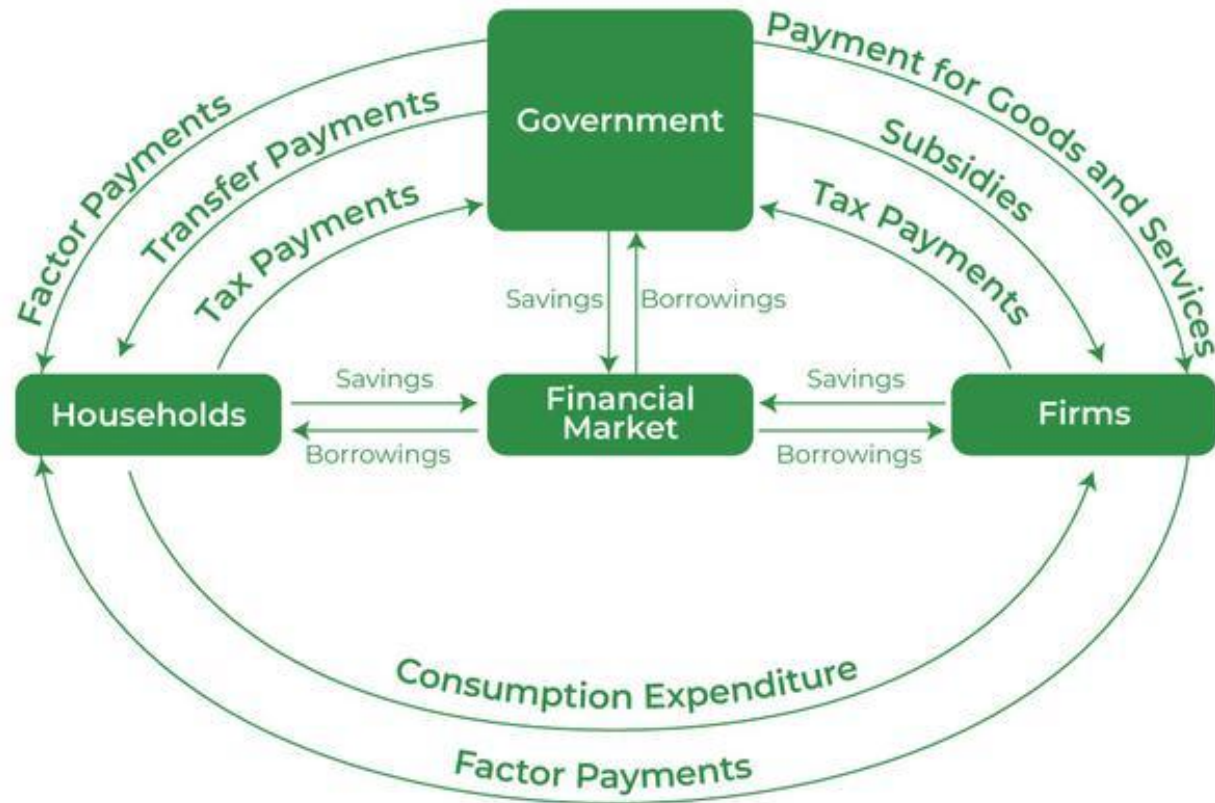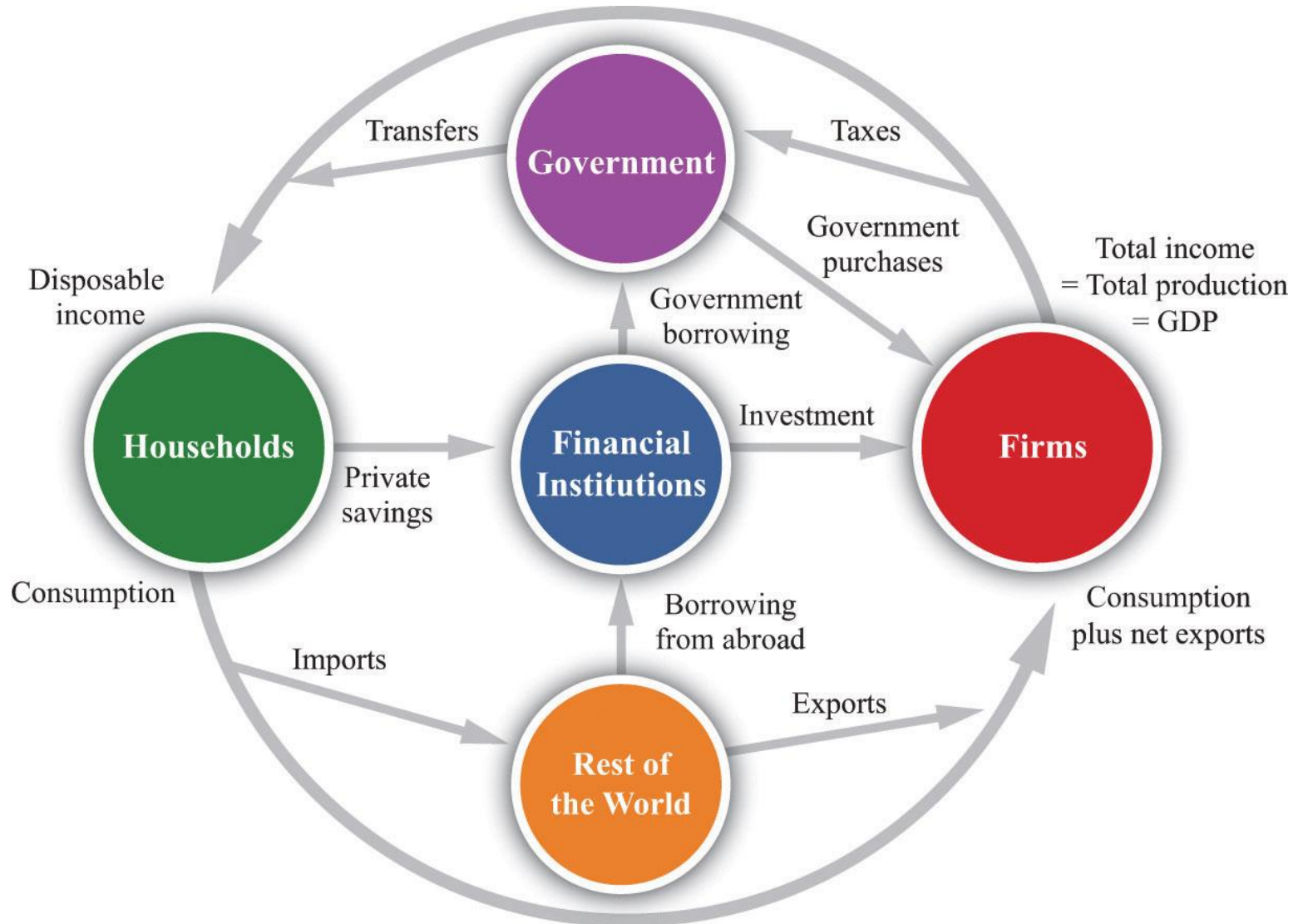
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Circular Flow Model with Government

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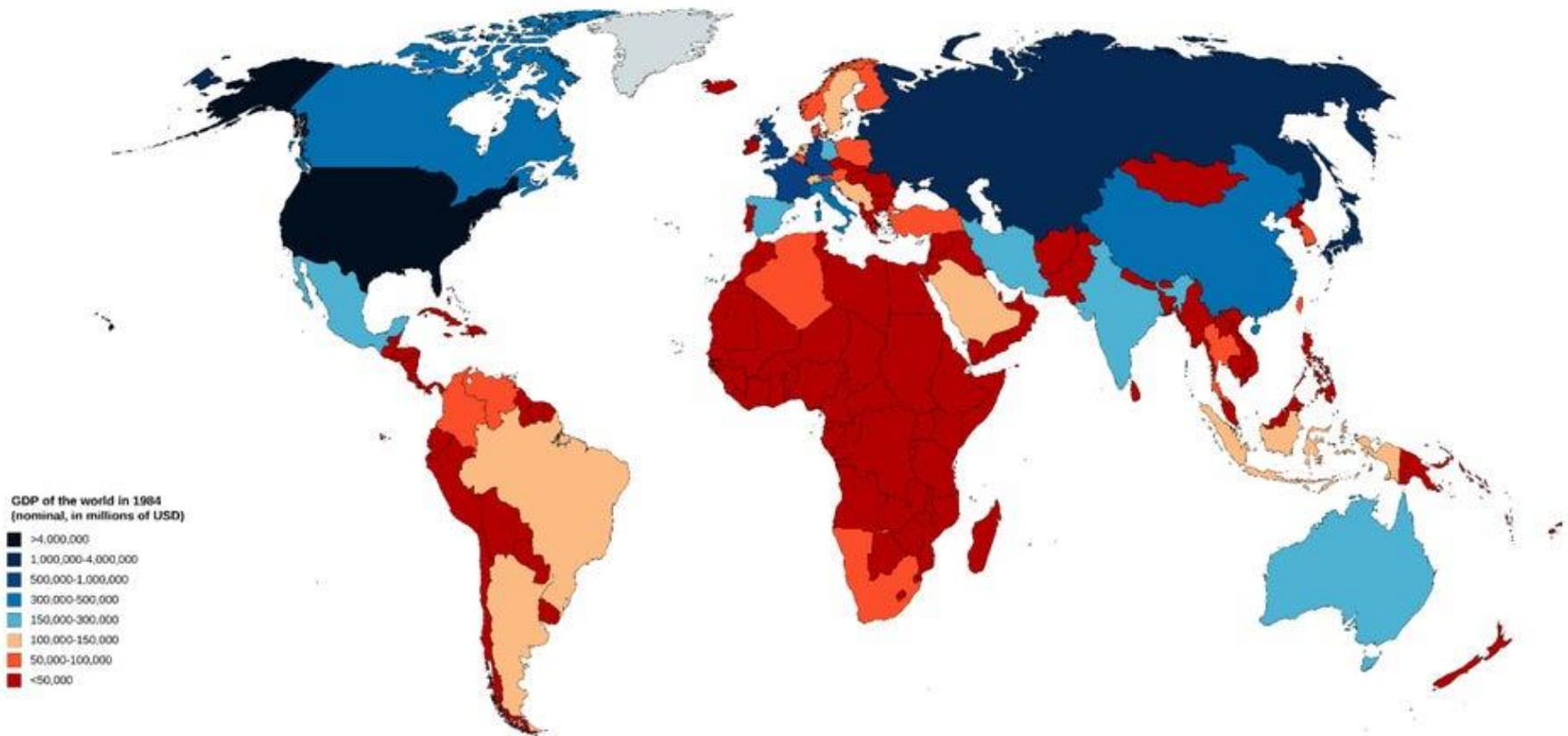
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National Accounts

- GDP: a measure of production produced by production factors located in the territory of a given country, regardless of who owns them.

- Calculating ways:
    - the value of all final goods produced in the country in a given year,
    - income stream of production factors,
    - the sum of added values from all branches of the national economy.

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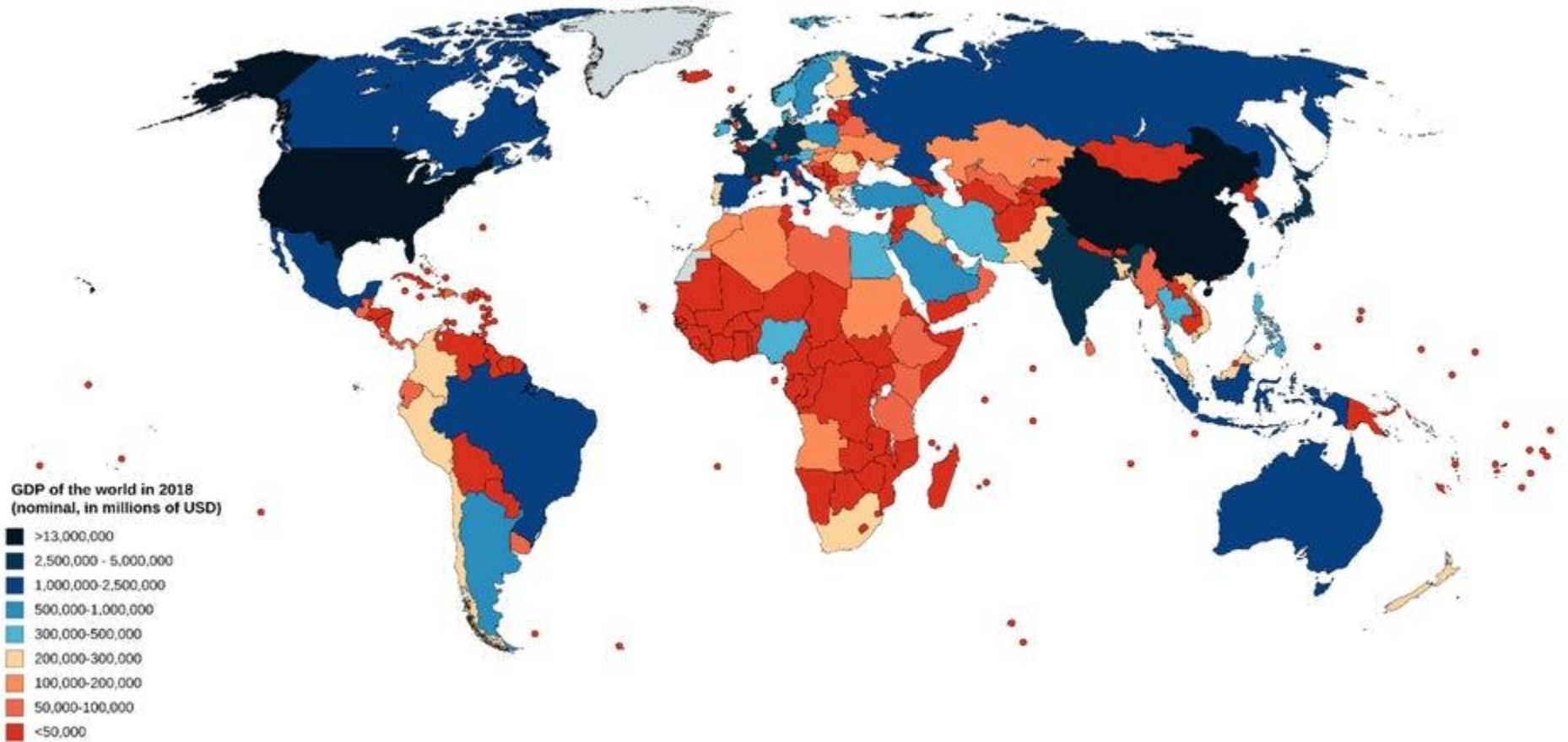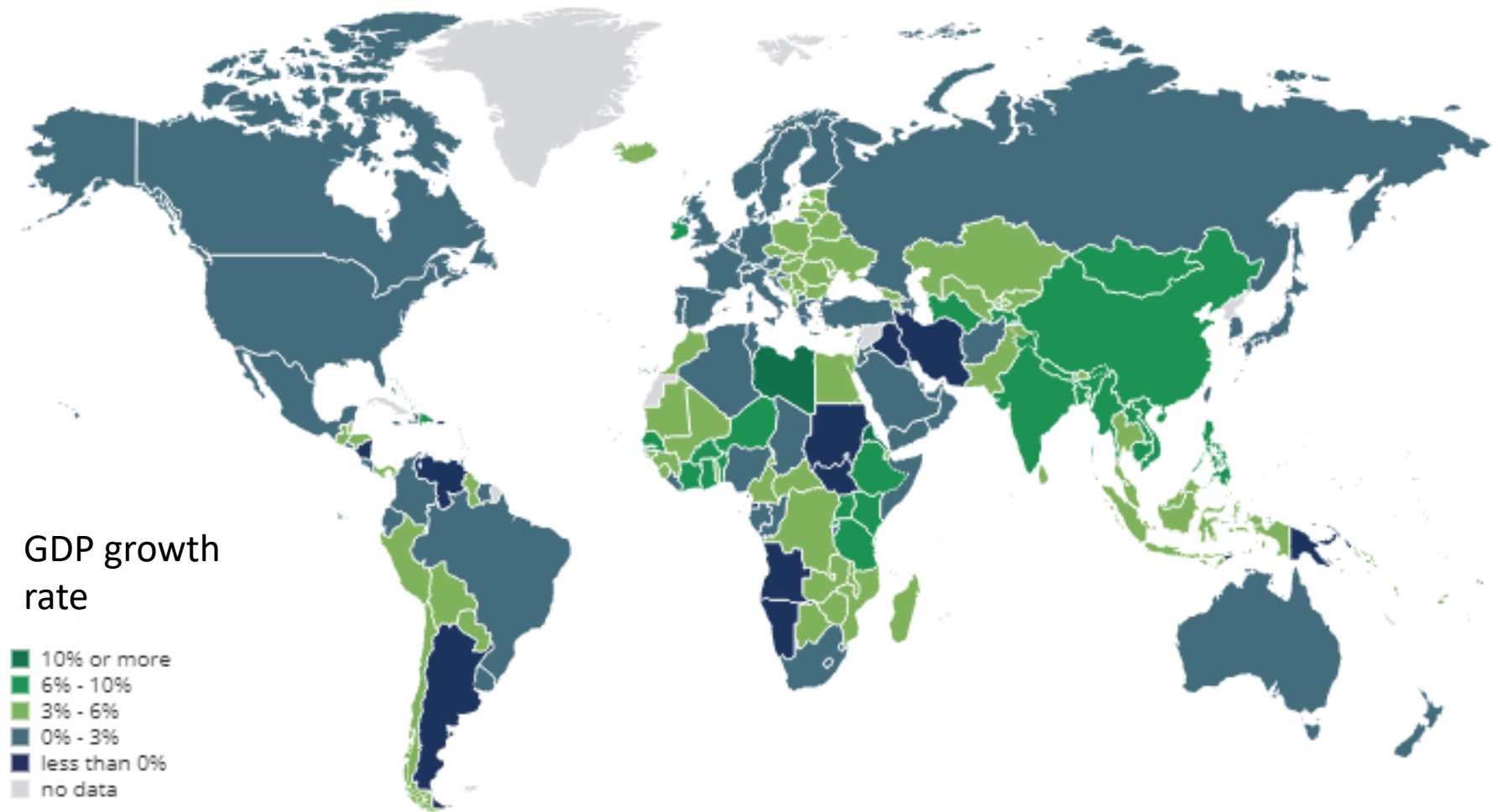
GDP of the world in 1984
(nominal, in millions of USD)

- >4,000,000
- 1,000,000-4,000,000
- 500,000-1,000,000
- 300,000-500,000
- 150,000-300,000
- 100,000-150,000
- 50,000-100,000
- <50,000

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GDP of the world in 2018
(nominal, in millions of USD)

- >13,000,000
- 2,500,000 - 5,000,000
- 1,000,000-2,500,000
- 500,000-1,000,000
- 300,000-500,000
- 200,000-300,000
- 100,000-200,000
- 50,000-100,000
- <50,000

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GDP growth rate

- 10% or more
- 6% - 10%
- 3% - 6%
- 0% - 3%
- less than 0%
- no data

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GDP per capita (PPP)

- 25,000 or more
- 15,000 - 25,000
- 5,000 - 15,000
- 1,000 - 5,000
- under 1,000
- no data

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GDP PPP per capita in Europe
2019 IMF estimate
In current international dollars

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National Accounts

Podstawowe oznaczenia:

- *GDP – Gross Domestic Product*
- C – *Consumption*
- S – *Savings)*
- G –*Government expenditures*
- I –Investment
- X –*eXports*
- Z – imports
- NX – *Net export = X-Z*
- T – Tax
- Te – Indirect Tax (e.g. VAT)
- Td – *direct tax*
- TR – Transfers
- A – depreciation
  - A = gross investments – net investment

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National Accounts(II)

- *Gross Domestic Product*
    - GDP = C + gross I + G + X – Z =
        = C + gross I + G + NX
    - GDP = wages + firms income + capital income (interests, dividends) + land income + income from lease (rent)

Gross National Product (GNP)
- GNP = GDP + net income from abroad

Net National Product (NNP)
- NNP = GNP – A =
    = C + net I + G + NX + net income from abroad

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Rachunki narodowe (III)

National Income(NI)

- NI = NNP–Te+ subsydies

Personal Income

- PI = NI – redistributed earnings - taxes on these earnings – social insurance contributions (ZUS) + TR + interest on public debt

Disposible Income(DI)

- DI = PI – Td = C + S

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Expenditures = income = production

Total inflows in the economy = total outflow

GDP(Y)

$Y \equiv C + S \equiv C + I$

$S \equiv I$

Expenditure:

$Y \equiv C + I + G - Te + subsidy$

Income:

$Y \equiv C + S - TR + Td$

$S \equiv (Y + TR - Td) - C$

Private sector financial surplus = government financial deficit

$S - I \equiv G + TR - Td - Te$

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Trade in value added

Disadvantages of traditional international statistics

- Traditional foreign trade statistics often include trade in intermediate goods and services (the value of the same labor, capital, intermediate goods, and services is included in the statistics whenever it crosses the border for further processing).

- It is not known who actually benefits from international exchange.

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Government Ballance

Government savings(Sg)

- Sg>0 –nadwyżka

- Sg<0 – deficyt budżetowy

- SgG ≡ Td + Te + ZUS + reinvested ernings − G − TR – subsidy – interest on public debt.

S-I ≡ - NX + (-SB) ↤ Deficit calculation!

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Are You Happy?

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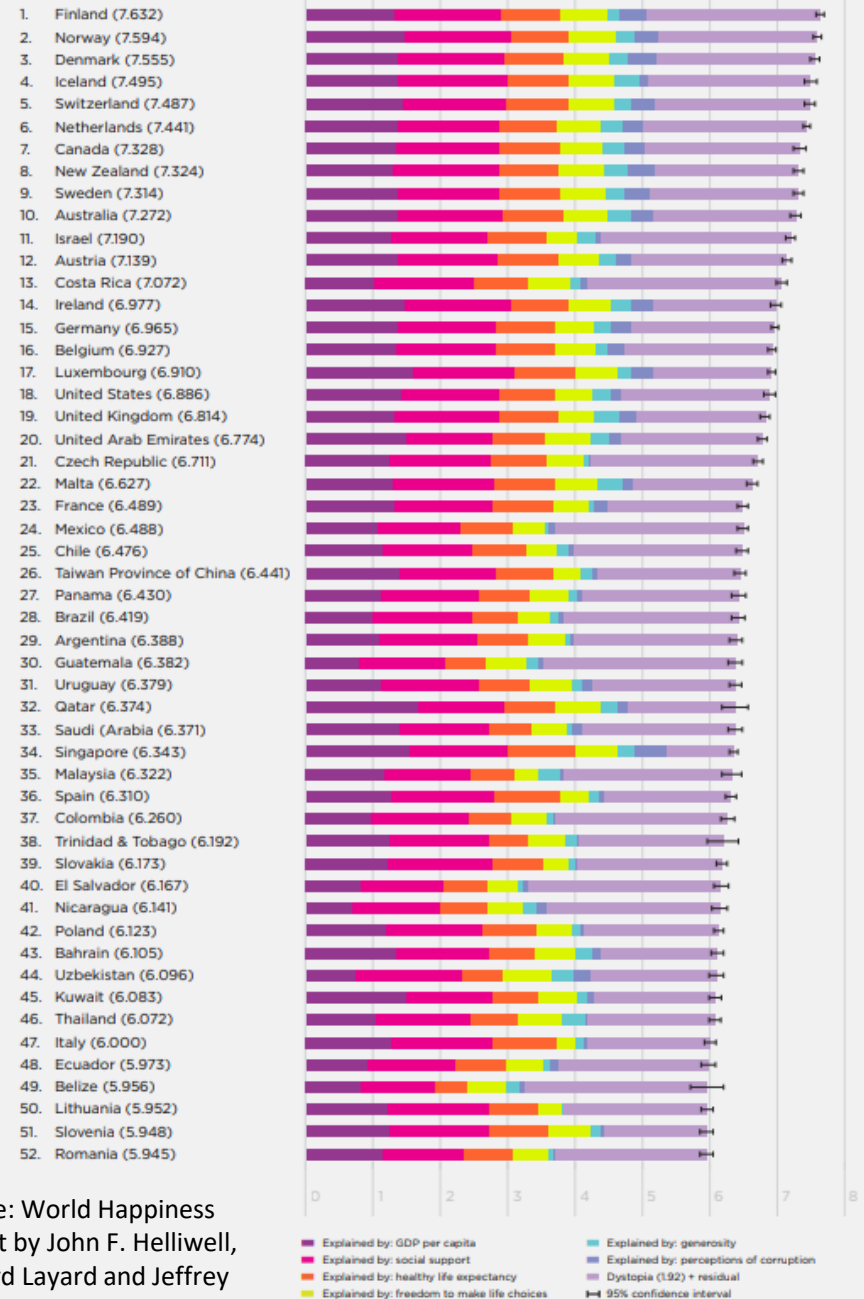**Wydział Nauk Ekonomicznych**

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Are You Happy?

Figure 2.1: Population-Weighted Distributions of Happiness, 2015–2017

Figure 2.2: Ranking of Happiness 2015–2017 (Part 1)

Source: World Happiness Report by John F. Helliwell, Richard Layard and Jeffrey D. Sachs

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Thank You for Your attention!