EPA 143A – Week One

Questions

THE CORONA-VIRUS RECESSION

Course contents for this week:

- Lecture EPA143A Note W-1: The corona-virus recession
- the video and article by *Financial Times* journalist Martin Wolf https://www.ft.com/video/fbaaa133-c94d-4e35-844b-bfde5f6a0635?playlist-name=latest&playlist-offset=1
- Sandbu, Martin. 2020. 'Coronavirus: how to tackle the economic crisis.' Video: https://www.youtube.com/watch?v=CwsTebQQAB8

QUESTION 1

Table 4 (below) is the input-output table for France (in 2015). It has the same industry-classification as the input-output table for Germany (Table 1 in Lecture Note W-1).

a. Give an interpretation of the entry (of €55 billion) in row 3 (for 'manufacturing') and column 5 (for 'construction') and of the entry (of €413 billion) in row 7 (for 'information') and the column of final demand.

b. How large is the GDP of France (in 2015) when measured from the side of supply? Explain your answer?

c. How large is the GDP of France (in 2015) when measured from the side of demand? Explain your answer?

d. For macro-economists, GDP is the main economic indicator of 'economic welfare' or 'living standards', not gross output. Why?

TABLE 4
Input-Output Table: France (2015)
(billion Euros)

	Ag	Mi	Man	EGW	Con	WRT	Info	FIRE	Govt	Serv	FD	Demand
Ag	11	0	34	0	0	0	1	0	1	3	35	85
Mi	0	0	21	9	2	0	0	0	0	0	-30	4
Man	17	1	197	10	55	35	30	7	27	31	305	716
EGW	2	0	21	30	3	10	13	7	12	11	27	136
Con	0	0	2	2	20	4	11	8	6	2	207	261
WRT	13	1	101	8	24	100	37	8	30	25	261	609
Info	2	0	52	13	30	77	195	45	150	36	413	1014
FIRE	3	0	20	5	10	44	64	97	40	18	236	536
Govt	0	0	3	2	1	2	4	1	4	1	701	720
Serv	0	0	10	3	4	18	33	16	28	28	412	552
VA	37	2	255	53	113	319	625	347	422	395		2566
GO	85	4	716	136	261	609	1014	536	720	552	2566	

Source: OECD statistics.
Notes: see TABLE 1 in Lecture Note Week 1.

QUESTION 2

Table 5 is the final demand table for France (in 2015). It has the same industry-classification as the final demand table for Germany (Table 3 in Lecture Note W-1).

1. What is the proportion of private consumption in final demand?
2. Does France have a trade surplus or a trade deficit? What is the proportion of the trade surplus/balance in French GDP?
3. France is a major exporter of manufactured goods. Can you think of an example of a manufactured goods exported by France?
4. What does investment demand I stand for? Give two examples of goods demanded as part of investment demand I?

TABLE 5
Final Demand in France (2015)
(billion Euros)

	C	G	I	E	*minus* M	FD
Ag	26	0	2	15	-10	35
Mi	0	1	0	1	-32	-30
Man	201	33	89	312	-329	305
EGW	26	0	0	3	-2	27
Con	2	0	206	0	-1	207
WRT	151	62	28	124	-103	261
Info	225	60	131	81	-84	413
FIRE	213	15	6	19	-17	236
Govt	518	180	2	2	-1	701
Serv	220	165	3	26	-2	412
Total	**1580**	**515**	**469**	**582**	**-580**	**2566**

Source: OECD statistics.
Notes: see TABLE 1 in Lecture Note Week 1

QUESTION 3

Consider Table 7 (below).

1. What is the inflation rate in Spain during 1960-2000?
2. What is the rate of nominal GDP growth in the Netherlands during 2000-19?
3. What is the rate of real GDP growth in the U.K. during 2000-19?
4. Italy's nominal GDP increased by 12.1% per year during 1960-2000. Dutch nominal GDP growth in the same period was 7.7% per annum. Real GDP in Italy and the Netherlands increased at almost the same rate during 1960-2000 (circa 3.4/3.5% per year). Explain why the difference in nominal income growth between Italy and the Netherlands is so much larger than the gap in real income growth.

TABLE 7
Nominal and real GDP growth: selected countries 1960-2019

Italy:	1960-2000	2000-2019
nominal GDP growth	12.1%	1.9%
rate of inflation	8.4%	1.7%
real GDP growth	3.7%	0.2%
Spain:	1960-2000	2000-2019
nominal GDP growth	13.2%	3.5%
rate of inflation	A	1.8%
real GDP growth	4.5%	1.7%
The Netherlands:	1960-2000	2000-2019
nominal GDP growth	7.7%	B
rate of inflation	4.2%	1.7%
real GDP growth	3.5%	1.7%
United Kingdom:	1960-2000	2000-2019
nominal GDP growth	9.8%	3.8%
rate of inflation	6.9%	2.0%
real GDP growth	2.9%	C

QUESTION 4

1. Suppose that in a given year the prices of intermediate inputs increase more than the price of industry *j*. We calculate real value added in industry *j* using the 'single-deflation' and the 'double-deflation' methods and the outcomes differ. Which of the two methods will give the higher outcome (higher value for real value added in industry *j*) and why?
2. What will happen to the GDP deflator when there is deflation? Deflation is the opposite of inflation.

QUESTION 5

Consider Table 8.

TABLE 8
Unemployment (U), unemployment rates (Ur) and labour force (Lf):
the Eurozone and the USA (2010-19)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
EU U	15.1	15.2	17.3	18.4	17.8	16.7	15.6	14.2	12.9	12.0
EU Ur	10	10.1	11.3	12	11.6	10.9	10.1	9.2	8.3	7.7
EU Lf	150.9	150.9	152.8	152.9	153.5	153.4	154.3	154.1	155.5	155.3
USA U	14.8	13.7	12.5	11.5	9.6	8.3	7.8	7.0	6.3	6.0
USA Ur	9.6	8.9	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7
USA Lf	154.4	154.5	154.4	154.9	155.1	156.5	158.2	158.7	161.9	162.8

Note: Unemployment and labour force are in millions of persons.
Source: AMECO database.

1. Assume that the number of discouraged workers in the Eurozone (12 countries) is 2.7 million persons in 2019. The unemployment rate U3 in 2019 is 7.7% in the Eurozone-12. Calculate the unemployment rate U6 for the Eurozone-12.
2. What will happen to U3 due to the corona-virus recession? Do you expect the number of discouraged workers to rise more in the U.S.A than in the Eurozone-12 or vice versa?

QUESTION 6

1. The average interest rates paid on public debt in 2019 by Germany, Italy and Portugal are 1.74%, 2.90% and 3.11%, respectively. Explain why the German state can borrow (issue bonds) at a lower interest rate than Italy and Portugal.
2. The ratios of public debt to GDP in 2019 for Germany, Italy and Portugal are 59%, 136% and 120%, respectively. Calculate the public interest rate burden as a percentage of GDP for Germany, Italy and Portugal.
3. In Portugal, tax revenues are 40% of GDP. What is the proportion of tax revenues used to pay the interest on Portugal's public debt? Who are receiving the interest paid by the Portuguese state?

QUESTION 7

1. British real GDP in 1965 was £ 606.4 billion (in constant 2015 prices). British real GDP in 2015 was £ 1916.9 billion. Calculate the average annual growth rate during 1965-2015.
2. Italian real GDP in 1960 was €432.2 billion (in constant 2015 prices). Italy's real GDP in 2019 was €1720.3 billion. Calculate the average annual growth rate during 1960-2019.
3. Consider the following identity: $y = \lambda \times h$, where y = real GDP (billions of euros), $\lambda =$ labour productivity (in euros) per hour of work, and h = hours worked in the economy. Re-write this identity in (instantaneous) growth rates.
4. Consider the following table, and calculate the 3 (instantaneous) growth rates.

	2018	2019	$\Delta \ln(.)$	growth rate (%)
Y	€1200 b.	€ 1452 b.		
Ln (y)				
λ	€120	€132		
Ln (λ)				
H	10 billion	11 billion		
Ln (h)				

QUESTION 8 (easy)

1. When it comes to macroeconomic policy, we can distinguish two policy actors – government and the central bank – and two categories of macroeconomic policy – monetary policy and fiscal policy. Which policy actor is responsible for which macroeconomic policy?

Government	Monetary policy
Central bank	Fiscal policy

2. Indicate which changes in policy instruments (on the right) correspond to the macroeconomic policy positions (on the left).

Fiscal stimulus	Reduction in government spending
Monetary stimulus	Increase in the interest rate
Fiscal austerity	Increase in public investment
Restrictive monetary policy	Lower interest rate
	Higher taxes