

Macroeconomics – Questions about Economic Growth

Directions: Think about the table below and the subsequent questions as you read Lectures 4 and 5 (on economic growth).

	GDP/worker 1999	GDP/worker 2007	Growth Rate	Saving Rate	Investment Rate	Fuel Exports
China	4,318	9,574	79.6	43.9	37.7	2.4
Ukraine	6,330	10,883	54.2	25.6	21.6	7.8
Estonia	26,124	44,369	53.0	22.3	30.2	6.9
Russia	10,991	17,850	48.5	30.9	18.0	53.1
India	4,958	7,124	36.2	30.0	26.9	7.6
Turkey	18,500	26,374	35.5	16.9	19.4	2.5
Indonesia	7,315	10,312	34.3	23.4	21.5	25.6
Czech Republic	18,337	24,557	29.2	23.9	26.4	2.9
Poland	18,230	24,373	29.0	17.5	20.4	4.8
Hungary	18,115	24,056	28.4	17.7	23.0	1.9
Bangladesh	2,729	3,587	27.3	30.0	23.6	0.6
Dominican Republic	10,020	13,093	26.7	16.8	17.9	5.0
South Korea	30,587	39,628	25.9	32.1	29.1	5.0
South Africa	9,293	11,725	23.2	15.3	16.3	10.3
Venezuela	23,518	29,585	23.0	33.9	21.3	84.7
Thailand	12,312	15,393	22.3	29.2	24.7	3.2
Morocco	7,922	9,883	22.1	29.5	26.6	2.6
Ireland	47,301	57,488	19.5	25.0	24.2	0.5
Iceland	36,943	44,576	18.8	14.5	24.4	0.8
Egypt	10,732	12,680	16.7	20.3	18.4	44.4
United Kingdom	43,543	50,989	15.8	14.9	17.0	8.5
Japan	39,539	45,687	14.5	27.1	23.7	0.6
United States	56,660	63,783	11.8	15.4	19.1	2.5
Norway	47,334	52,270	9.9	34.2	19.1	62.3
Israel	39,330	43,319	9.7	19.6	19.1	0.1
Mexico	17,975	19,635	8.8	21.9	20.3	11.5
Germany	39,339	42,639	8.1	21.7	18.9	1.8
Switzerland	39,046	42,318	8.0	32.7	21.5	1.6
France	50,703	54,931	8.0	20.5	19.1	3.1
Australia	46,027	49,644	7.6	19.8	24.1	22.2
Canada	45,939	49,543	7.6	22.7	20.5	16.5
Chile	27,956	30,052	7.2	22.0	20.4	1.4
Argentina	25,125	26,899	6.8	19.8	18.2	15.6
Brazil	12,278	12,733	3.6	15.7	16.3	4.7
Ecuador	11,751	12,064	2.6	23.2	21.3	48.3
Saudi Arabia	27,375	27,881	1.8	36.3	18.1	89.8
Algeria	7,996	8,083	1.1	54.6	23.5	97.2
Italy	46,447	46,562	0.2	20.3	20.6	2.5
Spain	40,186	38,834	-3.4	22.6	27.6	3.4
Jamaica	10,146	9,127	-10.6	17.2	27.1	5.1

Source: World Bank. "World Databank." <http://databank.worldbank.org>

variable	description
GDP/worker 1999	GDP per person employed at PPP in 1999 (in constant 1990 USD)
GDP/worker 2007	GDP per person employed at PPP in 2007 (in constant 1990 USD)
Growth Rate	pct. change in GDP per person employed (1999-2007)
Saving Rate	Gross Savings (as pct. of GDP, average 1999-2007)
Investment Rate	Gross Fixed Capital Formation (as pct. of GDP, average 1999-2007)
Fuel Exports	Fuel Exports (as pct. of merchandise exports, average 1999-2007)

Of the economies in the table above, some of the ones with the lowest levels of GDP per worker had the fastest growth rates over the period 1999 to 2007. By contrast, some of the economies with higher levels of GDP per capita grew more slowly.

- Why do less developed economies tend to grow faster than relatively more developed economies?

Economies that had faster growth rates also tended to have higher investment rates. In the full set of data (with 216 countries) the coefficient of correlation between the growth rate and the investment rate was +0.437.

- How does investment affect the level of GDP per worker?
- How does investment affect the growth rate of GDP per worker?

Most of the countries listed in the table save at about the same rate that they invest, but countries where fuel exports constitute a large share of merchandise exports tend to save significantly more than they invest.

- Why do you think saving rates tend to be much higher than investment rates in oil-exporting countries?