The Global Economy
Professor David Backus

Midterm Exam

Revised: March 7, 2009

You have 75 minutes to complete this exam. Please answer each question in the space provided. You may consult one page of notes and a calculator, but devices capable of wireless transmission are prohibited.

I understand that the honor code applies: I will not lie, cheat, or steal to gain an academic advantage, or tolerate those who do.

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(Name and Signature)

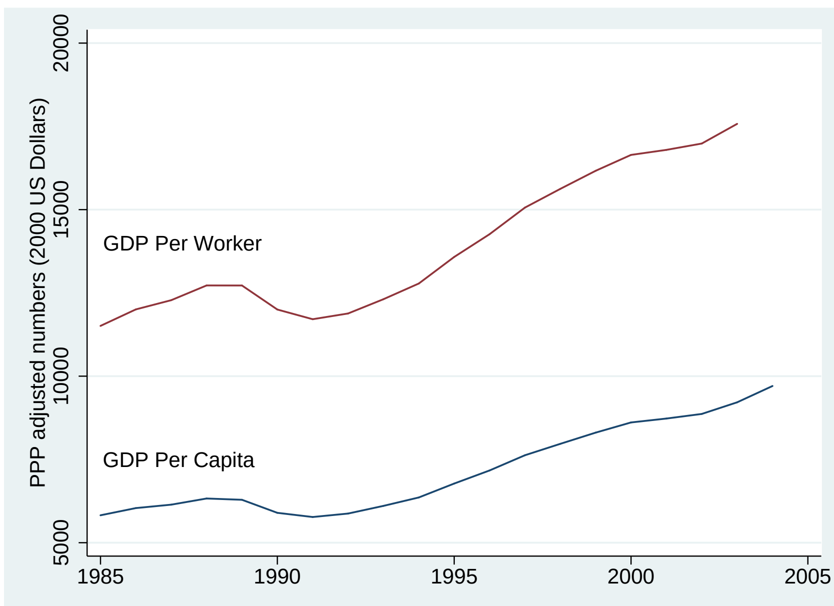

Figure 1: GDP Per Capita and GDP Per Worker in Poland.

1. *Poland goes to market.* After four decades as a centrally-planned economy, Poland made what it termed a "shock transition" to a market system, in which prices were set by the market rather than the government. The transition was traumatic. Between 1988 and 1992, GDP per capita fell, as some producers went out of business and others emerged. Since 1992, however, growth has been steady and dramatic. Your mission: use the data in Table 1 to quantify Poland's recent experience and speculate about its sources.

Year	Y/POP	Y/L	K/L	K/Y
1988	6,327	12,724	33,061	2.60
1992	5,875	11,882	32,622	2.75
2003	9,216	17,575	39,462	2.25

Table 1: Output, Capital, and Labor in Poland. Data from the Penn World Tables. POP is population, Y is GDP (output), L is employment, and K is capital (plant and equipment). Y and K are PPP-adjusted numbers, expressed in 2000 US dollars.

(a) During the transition period, 1988-92, what were the growth rates of GDP per capita and GDP per worker? What does their difference tell you? If markets are such a good idea, why didn't output increase immediately? (15 points)

(b) During the market period, 1992-2003, what were the sources of growth in GDP per capita? Note specifically the roles of employment and total factor productivity. (20 points)

(c) You would like to update the data, but the Penn World Tables end in 2003. You decide to look at the EIU's database, where you find data on population, employment, investment, and output, but not the capital stock. Show how you can use the connection between capital and investment to update the former. To be specific, show how you can generate the 2004 value of K/Y from real GDP growth (5%), depreciation (6%), the ratio of investment to GDP ($I/Y = 0.19$), and the 2003 value of K/Y. (5 points)

Indicator	Brazil	Colombia	Peru	Venezuela
GDP per capita (USD)	10,300	9,000	8,500	14,000
Political stability	35	10	20	10
Rule of law	45	35	30	5
Control of corruption	55	50	45	10
Contract enforcement	84	48	64	56
Credit information	50	50	60	0

Table 2: Measures of performance and institutional quality.

2. *Retail banking in Latin America.* Your first day as a summer intern at Banco Santander, your supervisor asks you to give a brief report after lunch on the institutional factors that might guide Santander's goal of expanding its retail businesses in Latin America: consumer lending, small business lending, credit cards, and so on. Santander, as you know, is a major player in the region, and regards it as a potential growth opportunity. You immediately turn to the Global Economy resource page and collect the information in Table 2.

   Based on this information, which countries do you think offer the most attractive opportunities? Why? Are there any issues you think deserve closer scrutiny? (30 points)

3. *Miscellany.*

   (a) *Food prices.* In 2008, when food prices rose sharply, India restricted food exports to keep prices down. Who would you expect to benefit from this policy? Lose? Is the overall impact on the Indian economy likely to be positive or negative? (10 points)

   (b) *Layoffs.* From the New York Times, March 6, 2009 (rough paraphrase): The WARN Act requires employers to give 60 days' notice if a plant is closed or 500 or more people are laid off at one location. Some wonder whether notice should be required for other job losses. A Berkeley professor says it's a matter of "transparency and decency." An IBM VP notes, however, that it is routine for the company to lay off some employees while hiring elsewhere. "This business is in a constant state of transformation." What do you see as the costs and benefits of wider application of the WARN Act? (10 points)

   (c) *Inflation.* Government statisticians now routinely adjust prices for changes in the quality of products. Since products typically get better, that means their quality adjustments often reduce measures of inflation. For retirees with benefits tied to the inflation rate, that means they get less money than they would if quality improvements were not taken into account. PIMCO's Bill Gross argues that this is unfair, because people buy the products that are available, whether they're improved or not. Do you agree with him? Why or why not? (10 points)